METROPOLITAN
TRANSPORTATION
COMMISSION

Joseph P. Bort MetroCenter
101 Eighth Street
Oakland, CA 94607-4700
Tel.: 510.464.7700
TTY/TDD: 510.464.7769
Fax: 510.464.7848
e-mail: info@mtc.ca.gov
Web site: www.mtc.ca.gov

October 14, 2008

REQUEST FOR PROPOSAL
511 Traffic Contractor
Letter of Invitation

Dear Contractor:

The Metropolitan Transportation Commission (MTC) invites your firm to submit a proposal to operate, maintain and further develop the 511 Traffic, Real-Time Transit and Phone Systems, which are part of the greater Bay Area 511 Traveler Information Program. The 511 traffic system collects, organizes and disseminates traffic speed, travel time and incident information in the Bay Area through 511 phone and the 511 website (511.org). The Real-Time Transit Information System was created by MTC, in cooperation with the Bay Area's transit agencies, to disseminate transit departure times through 511/511.org for all Bay Area transit operators that generate real-time predictions. The 511 phone and web systems are primary dissemination tools for multi-modal traveler information in the Bay Area. The selected firm will reliably operate and maintain the 511 Traffic, Real-Time Transit, and Phone systems; provide advice about system development or new approaches; focus on customer needs; further develop system components and functions; and provide emergency response services.

This letter, together with its attachments, comprises the Request for Proposal (RFP) for this project. You may download a copy of the RFP from MTC's website at http://www.mtc.ca.gov/jobs/. Responses should be submitted in accordance with the instructions set forth in this RFP.

1. Proposal Due Date

Interested firms must submit an original and fifteen (15) hard copies of their proposals, as well as electronic PDF and Word/Excel versions, no later than Monday, December 1, 2008 at 12:00 PM Pacific Time. ***Proposals received after that date and time will not be considered.*** Submission of the electronic copies alone will not satisfy the proposal submission deadline.

A submitted proposal shall be considered a firm offer to enter into a contract and provide the services described in this RFP for a period of one hundred fifty (150) days from the date of submittal.

2. MTC Point of Contact

Proposals and all inquiries relating to this RFP shall be submitted to the Project Manager at the address shown below. For telephone inquiries, call 510-817-5853. Email inquiries may be directed to ckuester@mtc.ca.gov.

Carol Kuester, Project Manager
Metropolitan Transportation Commission
Joseph P. Bort MetroCenter
101 Eighth Street
Oakland, CA 94607-4700

3. Scope of Work, Budget and Schedule

A preliminary scope of work is set out in *Appendix A*, which describes the required work tasks and deliverables under this RFP.

MTC has budgeted approximately $32 million over five (5) years to pay for the work described in *Appendix A, Scope of Work*. The period of performance for the contract will be five (5) years anticipated to start on July 1, 2009 and continuing through June 30, 2014. MTC will have the sole option to extend the contract for up to five (5) additional years, in increments of MTC's choosing. MTC also will have the option to remove specific tasks and their respective budgets from the contract based primarily on 511 operational needs.

If this procurement results in the selection of a Contractor who is not the incumbent, there will be a six (6) month transition period, during which the incumbent Contractor as well as the Contractor selected under this RFP will work on the project.

4. Disadvantaged Business Enterprise Participation

Disadvantaged Business Enterprises (DBEs) and other small businesses are strongly encouraged to participate in the performance of Agreements financed in whole or in part with federal funds (See 49 CFR 26, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs"). The Contractor should ensure that DBEs and other small businesses have the opportunity to participate in the performance of the work that is the subject of this solicitation and should take all necessary and reasonable steps for this assurance. The proposer shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontracts.

Proposers are encouraged to use services offered by financial institutions owned and controlled by DBEs.

Respondents are required to document their activities in the solicitation and selection of subconsultants on *Appendix K-3,* Proposer's List of Subcontractors (DBE and Non-DBE), Part I and II. For the complete DBE participation provisions applicable to this procurement see Section V.G and *Appendix K*.

5. Proposers' Conference, Traveler Information Center (TIC) Tours and Hosting Facility Tours

MTC will hold a Proposers' Conference on Monday, October 20th from 2:00 to 4:00 PM on the 2nd Floor of 101 8th Street, Oakland, in the Claremont Conference Room.

MTC will host tours of the 511 Traveler Information Center (TIC) on Monday, October 20th from 9:00 AM to 10:30 AM and 11:00 AM to 12:30 PM. The TIC is located at Caltrans District 4 Headquarters at 111 Grand Avenue in Oakland; a five-minute walk from the 19th Street BART station. Prospective bidders may also request a tour of the 511 Traffic hosting facility, AIS, located in San Diego, California. AIS tours will take place from 10:00 AM to 11:30 AM and 1:00 PM to 2:30 PM on Tuesday, October 21st.

For planning purposes, potential proposers must reserve spaces for a TIC tour and/or AIS tour by contacting Sarah Burnworth at Sburnw@mtc.ca.gov no later than 4:00 PM on Friday, October 17th. Spots will be provided on a first-come, first-served basis. Additional dates and times may be made available if needed.

6. Questions and Objections to the RFP

This RFP and any addenda will be posted on MTC's website. To receive email notice of any addenda to this RFP or responses to questions that may be issued by MTC, proposers must attend the Proposers' Conference or submit to the MTC Project Manager a written request to receive addenda.

Any requests for clarifications or questions regarding RFP requirements must be received by MTC no later than Friday, October 24, 2008 to guarantee response or consideration.

7. Proposal Evaluation

Proposals will be evaluated in accordance with the evaluation factors listed in Section IV, Evaluation Factors. MTC reserves the right to accept or reject any or all proposals submitted, waive minor irregularities in proposals, request additional information or revisions to offers, and to negotiate with any or all proposers. Any contract award will be to the Contractor that presents the proposal that, in the opinion of MTC, is the most advantageous to MTC, based on the evaluation criteria specified in Section IV.B.

8. Contractor Selection Timetable

Date	Procurement Milestone
October 20, 2008 2:00 PM	Proposers' conference
October 24, 2008	Last date for requests for exception and clarification
October 31, 2008	Issue RFP Addendum, if necessary
December 1, 2008 12:00 PM	Closing date/time for receipt of proposals
January 27 & 28, 2009	Proposal discussions, if held
February 4, 2009	Issue Request for Best and Final Offer (if necessary)
February 25, 2009	Best and Final Offers due (if necessary)
April 10, 2009	MTC Operations Committee approval
July 1, 2009	Start of new contract

9. General Conditions

MTC will not reimburse any individual or firm for costs related to preparing a response to this RFP.

The selected proposer will be required to sign a contract with MTC, the terms and conditions of which are provided in *Appendix H, MTC 511 Traffic Contract Terms and Conditions*. The resulting contract will be funded in part with federal funds. The resulting Contractor will be subject to a pre-award audit, in accordance with California Department of Transportation's Local Programs Procedures LPP 00-05.

Particular attention should be paid to the insurance requirements set out in *Appendix H*. Any objections to the specified coverage levels must be submitted to the MTC Project Manager in *Appendix I, Requests for Exceptions or Modifications* on or before October 24, 2008; otherwise compliance with the insurance requirements will be assumed.

10. Authority to Commit MTC

Based on an evaluation conducted by an evaluation panel, the Executive Director will recommend a contractor to the Commission, which will commit MTC to the expenditure of funds in connection with this RFP.

Thank you for your participation.

Very truly yours,

Ann Flemer
Deputy Executive Director

Attachments
AF:CK:BL
J:\CONTRACT\Procurements\Operations & Support Svcs\RFPs\511\511 Traffic RFP\511 Traffic RFP.doc

REQUEST FOR PROPOSAL

of the

METROPOLITAN TRANSPORTATION COMMISSION

for the

511 TRAFFIC CONTRACTOR

October 14, 2008

Joseph P. Bort MetroCenter
101 Eighth Street
Oakland, California 94607-4700

Table of Contents

I. PROJECT DESCRIPTION

A. PROJECT BACKGROUND

1. The Metropolitan Transportation Commission (MTC)

MTC is the regional transportation planning agency and the Metropolitan Planning Organization (MPO) for the nine-county San Francisco Bay Area, with statutory responsibilities for coordinating transit services in the region.

The San Francisco Bay Area includes the nine counties bordering the San Francisco Bay: Alameda and Contra Costa Counties in the East Bay; Marin, Napa, Solano and Sonoma Counties in the North Bay; San Francisco and San Mateo Counties on the Peninsula/West Bay; and Santa Clara County (the region's most populous county) in the South Bay. The region has a population of nearly 7 million (the fifth largest metropolitan area in the nation), supplies over 3 million jobs, and encompasses 7,179 square miles.

2. The San Francisco Bay Area 511 Program

MTC manages the 511 Traveler Information Program to provide coordinated information about the public's travel choices and to fulfill the following mission, developed in the *511 Strategic Plan (April, 2006)*:

> "The 511 program must cost-effectively provide traveler information that customers both want and are prepared to act on, thereby enhancing the efficiency and maximizing the capacity of the Bay Area transportation system. This information should be accurate, reliable, multimodal, comprehensive and regional in scope. Responsibility for the gathering, processing and dissemination of 511 information should be regionally coordinated and rationally allocated to Bay Area transportation organizations — in both the public or private sectors — according to institutional interest, ability and wherewithal."

The 511 Traveler Information Program is a partnership among MTC, Caltrans, the California Highway Patrol, and many of the region's transit and paratransit operators. The program provides traffic, transit, rideshare and bicycling information to the public by telephone via the federally dedicated information phone number (511) and on a website at 511.org. The information is organized by mode and provided by multiple contractors as described below. The selected Contractor will coordinate with the other MTC 511 Program Contractors to deliver the 511 Program and present it to the public as a single, comprehensive service.

a. Traffic

511 Traffic services are provided by the 511 Traffic Contractor (currently Telvent Farradyne) and include information about traffic speeds, roadway incidents, construction activity and special events. Key traffic dissemination features include 511 Driving Times℠, which are point-to-point freeway driving times on select Bay Area freeways; historical driving times (Predict-a-Trip℠); and MY 511, which allows users to customize the traffic information they receive

b. Transit

511 Transit services are provided by both the 511 Transit Contractor (bd Systems/SAIC) and the 511 Traffic Contractor. bd Systems collects, processes and disseminates transit schedule, route, fare and other information for all Bay Area transit operators on the transit.511.org website and also provides the 511 transit trip planner featured on the 511 website. The trip planner generates customized trip itineraries for travel on all major transit operators in the Bay Area.

The 511 Traffic Contractor, through its responsibility for providing the 511 phone system, provides pre-recorded transit information, including current transit incidents and also transfers callers to transit operator information centers. The Traffic Contractor is also responsible for collecting and disseminating real-time transit data (e.g., predictions on when the next transit vehicle will depart).

c. Rideshare

The 511 Rideshare Contractor (PB Americas) provides the 511 Regional Rideshare services. Rideshare information on 511.org includes a carpool matching database, vanpooling information, park-and-ride lot locations, employer resources and available rideshare incentives. Callers to 511 requesting rideshare information are connected to the 511 Rideshare Contractor staff for personalized services. The selected 511 Traffic Contractor will be responsible for providing transfers to the rideshare program call center.

d. Bicycling

The bicycling.511.org website provides bicycle information, including links to maps, use on transit, safety practices, local organizations and an interactive tool to map custom bicycle routes. Callers to 511 requesting bicycling information are connected to the 511 Rideshare Contractor staff who provides personalized services for the bicycle program. The 511 Rideshare Contractor and MTC staff support the bicycling website.

e. 511.org Homepage

The 511 homepage is designed and managed by MTC's 511 Marketing Contractor, Swirl. Swirl also provides comprehensive design guidance for all other web pages and helps facilitate their coordination. The 511.org home page serves as a portal to each of the modal sister pages (Traffic, Transit, Rideshare, Bicycling), while also providing promotional space for 511 and other MTC operational programs, and current traffic conditions via a live traffic map. The 511 Traffic Contractor is responsible for providing, operating and maintaining the 511.org homepage servers.

3. 511 Traffic & Real-Time Transit Program History

Originally called TravInfo, the San Francisco Bay Area's program to provide traveler information, began development on June 1, 1993 after being selected by the U.S. Department of Transportation as a Field Operational Test (FOT). TravInfo became an officially deployed traveler information system on September 30, 1998. In 2000 MTC selected PB Farradyne (later Telvent Farradyne) to help MTC design, build, operate and maintain the 511 traffic and phone system (then called TravInfo) into its present design.

In December 2002, MTC launched the 511 phone number and the interactive voice response system as well as the 511.org web page and associated "sister" pages (traffic.511.org, transit.511.org, etc.) In March 2004, MTC added on-demand, point-to-point freeway driving times (511 Driving Times℠) and a fully interactive traffic web map. The 511 traffic system is now a mature, well-developed system that meets the performance standards described in *Appendix A-1, Key Performance Indicators and Associated Payment Deductions*. It is anticipated that the system will have to continue to change to take advantage of new data collection and data dissemination methods to stay current and cost-effective.

In July 2005, MTC launched a real-time transit information pilot on the 511 phone system, and in the same month, MTC awarded grants to assist eight transit agencies to develop real-time transit data. MTC is now implementing a regional real-time transit information data clearinghouse to compile real-time predictions and disseminate them through 511, 511.org, and a network of signs at 24 transit hubs. In August 2008, 511 began disseminating real-time transit predictions (called 511 Departure Times) for San Francisco Muni.

In March 2008, MTC launched 511's newest feature, MY 511℠, to provide personalized traffic and real-time transit information. MY 511 allows users to save their favorite trips for quick access to personalized information on the web and phone. On the phone, MY 511 provides bypass menu options to allow users to hear their personalized 511 Driving Times. On the web, MY 511 users can build their own 511.org home page and add their favorite 511 driving times and traffic camera views. Users can also request MY 511 to send customized alerts to a phone or e-mail. 511 Departure Times are scheduled to become available on MY 511 in early 2009.

4. Program Overview

This section explains how the 511 Traffic Contractor's responsibilities are currently conducted and how they are anticipated to be conducted at the start of the newly awarded contract. The new 511 Traffic Contractor will operate and maintain all existing assets, unless otherwise negotiated.

a. Traffic Data Collection and Processing

The 511 Traffic Contractor collects traffic data using three traffic data sources - Caltrans' loop detectors, SpeedInfo doppler radar, and TrafficWatch probe data.

- Caltrans loop data: Custom 511 software, called the Caltrans Detector Data Interface (CDDI), connects to Caltrans' Advanced Traffic Management System (ATMS) to read the spot speed loop data as it is broadcast. The 511 Traffic Contractor is responsible for operating and maintaining the CDDI.
- SpeedInfo: The spot speed data (generated using doppler radar technology) from SpeedInfo is currently purchased through a subcontract between the 511 Traffic Contractor and SpeedInfo.
- TrafficWatch: The probe data are collected through the MTC-owned TrafficWatch system, which reads Electronic Toll Collection (ETC) transponder tags on passing vehicles and calculates speed by noting when the same vehicle passes two identified

points in the system. The 511 Traffic Contractor is responsible for the deployment and maintenance of TrafficWatch equipment in the Caltrans right-of way per MTC's cooperative agreement with Caltrans, which allows MTC to use the Caltrans right-of-way free of charge. MTC considers deployment of the TrafficWatch equipment to be largely complete.

The 511 traffic data collection system divides the Bay Area freeway system into links, and the 511 Automatic Link Data Fusion (ALDF) determines the optimal speed source for every link by calculating the speeds for each link every 60 seconds. In addition to the three data sources described, the system uses two algorithms to provide proxy data. The Link Data Interpolator (LDI) estimates travel time and speed based on speeds and travel times along nearby links. The Smart Data Merge is an algorithm that allows the use of spot speed data for individual links within a TrafficWatch segment. The TrafficWatch segment comprises several links, some with spot speeds and some without spot speeds.

Approximately 37% of the links in the system rely on the Link Data Interpolator (LDI) for their speed and travel time data, 30% rely on TrafficWatch, 27% rely on Speedinfo, 5% rely on Caltrans' loops and 1% rely on the Smart Data Merge (SDM). The South Bay (Santa Clara County) relies most on the LDI since fewer vehicles use FasTrak making TrafficWatch a less viable data source.

b. Real-Time Transit Data Collection and Processing

MTC and transit agencies are jointly responsible for delivery of a real-time transit information system (the "clearinghouse" or "Regional System") to provide accurate transit vehicle arrival/departure predictions for every stop on transit routes equipped with the technology to make these predictions.

The Regional System collects all related real-time transit data from transit agencies using a standard format that populates a regional data store. The data are then disseminated via the 511 phone system, 511.org, MY 511, regional real-time signage, and transit operators. The preferred data transfer standard is Java Message Service (JMS). Transit agencies may contract with any company of their choosing to collect and generate real-time transit data predictions, so long as that company can transmit data to the regional data store via defined transfer formats.

By the time the new contract takes effect, SF MTA, BART and WestCat will be part of the real-time transit program. The 511 Traffic Contractor will add VTA, Caltrain, SamTrans, and Golden Gate Transit in late 2009 at the earliest.

c. 511 Traveler Information Center

The 511 Traffic Contractor operates the 511 Traveler Information Center (TIC) located at Caltrans District 4 Headquarters in Oakland. Per a cooperative agreement with MTC, Caltrans provides office space rent-free to the Contractor. The TIC operates 24 hours a day, seven days a week to support the 511 phone and web systems. It is adjacent to the Caltrans Transportation Management Center (TMC). TIC staff includes the 511 Operations Manager,

511 System Administrators, TIC Supervisors and TIC Operators. The TIC Operators are members of the Communications Workers of America (CWA) labor union.

In addition to monitoring the automated freeway traffic data and the real-time transit data, TIC staff manually collect traffic and transit incident data. Data sources include the Caltrans Traffic Management Center (TMC), the California Highway Patrol Computer Aided Dispatch (CHP CAD), video cameras, the Caltrans CMS (Changeable Message Signs), Caltrans construction schedules, planned events (e.g. sporting events, concerts), calls from reliable sources (e.g. MTC project staff), and transit agency dispatch centers.

TIC staff manually enter incident/construction data with the following tools: the 511 Enhanced Data Fusion System (EDFS), the 511 Manager, the web ticker and the web content management system. Through the EDFS, TIC staff can view and analyze relevant traffic data. The EDFS interfaces with the data collection and data dissemination servers. The 511 Manager allows TIC operators to place recorded messages into the 511 phone system. The web ticker allows TIC operators to post urgent messages on the 511.org website that scroll across the top of operator-selected 511 pages. The web Content Management System (CMS) allows TIC operators to post transit announcements.

The Regional Transportation Management Center (TMC) at Caltrans District 4 is the focus of regional strategies to increase system efficiency, improve traffic operations, increase availability of traveler information, and implement incident management strategies. Currently, the Bay Area's Regional TMC provides only a partial level of the desired functionality. Work is now underway to procure a new Advanced Transportation Management System (ATMS) for the TMC through a sole source contract with Delcan, which is expected to quickly accommodate operational needs specific to this region, such as the use of dual loop detectors, part-time HOV lanes, ramp metering, and an interface to the Bay Area 511 system. Implementation of new ATMS software is expected during FY 2009/10. The 511 Traffic Contractor will be required to ensure that interfaces between 511 and the ATMS are continuously supported, and that opportunities for more effectively interfacing with the ATMS and TMC are fully exploited.

d. Data Dissemination

The 511 Traffic Contractor disseminates traffic and real-time transit data, as well as some select transit information, through the features and channels described below.

(i) The 511 Phone System

The 511 Traffic Contractor provides the 511 phone system, which is an Interactive Voice Response (IVR) system using a Nuance platform and Voice over Internet Protocol (VoIP). When 511 the telephony servers are off-line, the phone system's failover backup menu - NVP Lite - answers incoming calls and provides options for callers to transfer to major transit agencies.

The 511 phone system, which is designed to be accessible to people with disabilities, provides automatic, dynamic traffic and transit departure information. It also provides pre-recorded static information about public transportation. In addition, the phone

system provides transfers to live operators at transit agencies, the 511 Rideshare Program, Solano/Napa Commuter Information, FasTrak®, TransLink®, and 511 Freeway Aid dispatch. The 511 Traffic Contractor, however, does not provide a customer call answering center.

The 511 Traffic Contractor is responsible for providing the following phone features:

(a) Traffic Conditions - provides incident descriptions and traffic speeds for the highway, bridge, city, or hotspot requested by the caller.

(b) 511 Driving Times℠ - provides the real-time travel time between an origin and destination requested by the caller. All associated incidents and slowdowns are provided along with the driving time.

(c) 511 Departure Times℠ - provides the times for the next three transit vehicles departing per route based on the caller-requested stop ID (or agency, route, direction, and station).

(d) MY 511℠ - allows users to bypass phone menu prompts to go directly to current information for their preferred trips. During registration at my511.org, users save up to three phone numbers that 511 will recognize. When calling 511, the phone system recognizes MY 511 users via caller ID and immediately asks for the name of a saved trip set-up during MY 511 registration (e.g. "home to work"). MY 511 will respond with current traffic or real-time transit information for the trip.

(e) Phone Floodgates - greet a 511 caller at either the top of the 511 menu or at a select sub-level with breaking news and important announcements.

(f) Transit Agencies and Paratransit - 511 provides callers with recorded information about transit agencies and paratransit providers. It also provides free transfers to transit agency and paratransit operators.

(h) Ridesharing, Bicycling, and Commuter Incentives - Callers requesting ridesharing, bicycling or commuter incentive information are provided free transfers to the 511 Rideshare operator. Callers can also request this information by a free transfer to the operator for Solano/Napa Commuter Information.

(i) Airports - 511 provides callers with recorded traffic conditions information or a free transfer to the 511 Rideshare operator who can provide parking and public transportation information for airports.

(l) Phone Customer Survey Tool – prompts callers with survey questions after a user requests and receives particular types of information. The survey may include multiple choice, yes/no, and ranking questions. The survey tool is used periodically.

(m) Phone Comment Feature – allows 511 callers to leave a comment about the service by pressing 7 7.

(n) 511 Emergency Abbreviated System (EAS) Phone: Sub-Regional Disaster (SRD) Menu - adds a separate emergency menu to the regular phone Main Menu, so that callers can say "travel alert" and be taken to an emergency menu with detour routes, transit affected by the emergency, and rideshare/park & ride information.

(o) 511 Emergency Abbreviated System (EAS) Phone: Regional Disaster (RD) - replaces the regular phone menu and regular hard-coded phone script with an emergency-only phone menu. Phone features and functions that do not support the provision of emergency information are not available to callers. Callers are timed-out of their call after a certain period to manage capacity.

(ii) The 511 Website

The Traffic Contractor is responsible for hosting, and disseminating traffic data through, traffic.511.org and my511.org and disseminating real-time transit data through the 511 transit page and my511.org, both of which are designed to be accessible to people with disabilities. The 511 Traffic Contractor is also responsible for providing and maintaining the 511 homepage servers.

The Traffic Contractor provides the following 511 web features:

(a) Traffic Map with Driving Times – is an interactive map featured on Traffic.511.org. The map displays color-coded traffic speeds by freeway link as well as incidents and other relevant roadway information. Users can calculate a driving time by choosing a starting and ending point on the map. A static version of the map is also included on the 511.org and the traffic home pages.

(b) Traffic Information (Text Version) - provides a table of all current incidents and current and/or scheduled construction and events, including the location, estimated duration, and an overall.

(c) Driving Times (Text Version) - allows users to calculate a driving time between a starting and ending point by selecting from a list of cities and intersections. The results page presents the current driving time, typical driving time, and trip length for each available trip.

(d) Predict-a-Trip^{SM} - provides the historical average (i.e., typical) driving time between a user-selected origin and destination for a user-selected day and time.

(e) 511 Departure Times - will provide the time that the next transit vehicle will depart the stop selected by the user. This feature will be available on the phone and website in spring 2009.

(f) MY 511 - allows users to create and view their own MY 511 personalized home page. During registration, users set up and save favorite driving times trips, transit departure times routes, and traffic camera views. At my511.org, users are also able to register to use MY 511 on the phone, and to receive text and e-mail alerts for traffic/transit status updates and traffic severity alerts.

(g) Breaking News & Construction - provides breaking traffic news, and upcoming/planned event and construction announcements that are input by the Traveler Information Center (TIC) operators. The breaking news messages are highlighted on the traffic home page, with a link to more detail and the list of the construction/event messages.

(h) Popular Driving Times - are displayed in a table on the traffic home page by corridor and include both the current and typical time. The presented corridors change for the morning and evening commutes.

(i) The 511 Ticker - allows messages to scroll across the top of one or more selected 511 web pages, including the 511.org home page, modal sister pages, and/or my511.org to provide breaking news and important announcements to 511 users.

(j) The Emergency Abbreviated System (EAS) - is a blog that replaces 511.org in the event of an emergency to provide information quickly and simply. The EAS conserves system capacity, since it does not include graphics, maps, links, etc. Depending on the nature of the emergency, some, or all, of the 511 web pages are redirected to the EAS.

(iii) Traffic Data Feeds

The 511 Traffic Contractor provides traffic data feeds free of charge to Information Service Providers (ISPs) through an XML data feed (TravInfo Open Messaging System (TOMS)) to encourage wide dissemination of traveler information. MTC is considering strategies for obtaining in-kind advertising or requiring credit for the 511 program for in exchange for use of these data feeds.

The 511 Traffic Contractor provides the “Caltrans Reverse Data feed” to Caltrans to support dissemination of 511 traffic data on freeway Changeable Message Signs (CMS). Caltrans also uses the data for the Caltrans District 4 Traffic Management Center and the statewide freeway performance measurement system (PeMS).

(iv) Real-Time Transit Data Feeds

The Real-Time Transit Regional System disseminates real-time information to 511 and provides a real-time data feed to transit agencies upon request, but not to third-party Information Service Providers (ISPs) at this time.

(v) Real-Time Transit Hub Signs

Signs at transit hub locations are connected to the Internet and display real-time predictions by serving up specific real-time transit information web pages built by the 511 Traffic Contractor for each hub.

(vi) Text and Email Alerts

Currently, MY 511 users can register to receive personalized email and/or text alerts about driving times and/or real-time transit departures. In the future, text messaging could also be a way to disseminate information as requested by users.

e. Hosting and Redundancy

The MTC 511 program currently utilizes American Internet Services (AIS) (www.amerincanis.net) in San Diego to host its Data Collection and Data Dissemination (Phone and web) servers. MTC selected a location outside the Bay Area to ensure continuity of 511 service in the event of a large-scale Bay Area emergency, as recommended by the *511 Strategic Plan (April 2006).*

This arrangement is managed by ICx, a Telvent Farradyne subcontractor. Internet access includes availability of up to 7mbps of sustained Internet traffic, with on-demand access to additional bandwidth, two cabinets and 3 30 amp and 2 20 amp circuits of redundant power.

The existing agreement with AIS can be extended through the life of the new Contract, or the agreement with AIS can be terminated. If the successful proposer is not the incumbent, they may either negotiate an assignment with AIS and ICx or recommend an alternate hosting facility and provide recommendations, plans and cost estimates for moving equipment.

In the event of an outage at AIS, back-up servers are located at the TIC in Oakland. The back-up equipment is currently designed only to provide a minimal level of information until full functionality at AIS can be restored. MTC is interested in exploring options for providing a more robust, fully redundant back-up system that could provide full functionality.

f. Project Management

MTC's Project Manager for the 511 Traffic contract provides primary direction to the Contractor. MTC staff continuously monitors Contractor performance. MTC's ITS/511 Program Technical Advisor (Kimley-Horn and Associates) provides advice and services regarding software development processes, ongoing Intelligent Transportation System (ITS) operations, ITS architecture, procurement assistance and other technical aspects of MTC's projects.

The project also receives guidance from the MTC 511 Change Control Board (CCB), which consists of MTC and Contractor staff. The CCB discusses optimizations and enhancements on a regular basis to review issues, make decisions and set priorities.

B. PROJECT GOALS

The following goals provide the foundation of the project's Scope of Work (*Appendix A*). Proposers should be mindful of these goals when developing their approach to the work. It is MTC's intent that these goals will help proposers allocate and balance the project's resources.

1. Provide high quality 511 services before expanding the system.

MTC is committed to ensuring excellent quality and performance of 511's existing services before expanding the system to offer more. This will require investments in maintaining and improving the current functionality.

The contract identifies system improvements as either "optimizations" or "enhancements." "Optimizations" are one-time system adjustments, fixes or improvements that will take no more than 40 person-hours to complete and that are relatively uncomplicated and low risk. Optimizations are considered part of ongoing project maintenance to ensure the Contractor responds nimbly to requests for simple improvements and provides the necessary staff and resource commitment to such improvements.

"Enhancements," on the other hand, are significant improvements that require significant Contractor effort (e.g., more than 40 person-hours of development time) due to the degree of complexity or risks likely to be encountered during development. MTC will direct the Contractor to implement enhancements following the execution of Task Orders to ensure thoughtful planning and a full understanding of their impacts on existing operations and long-term project costs. Enhancements could add functionality or improve existing functionality.

2. Provide accurate and reliable traffic and real-time transit information.

MTC is committed to providing a transportation information system that is accurate and reliable. As such, the Contract resulting from this RFP will include performance standards for data accuracy, phone and web availability, and voice response quality. These standards are met by the current system and are described in *Appendix A-1, Key Performance Indicators and Associated Payment Deductions*. Meeting, or improving upon the performance standards, could require changes in the methods used to deliver the current system, such as new data collection or data dissemination technologies.

3. Maintain and increase 511 usage.

MTC is committed to ensuring that 511 traffic and transit data are used by as many people as possible to benefit both individual users and support effective management of the transportation system. MTC expects that increasing usage will require enhancements such as disseminating 511 data through channels such as text messaging, e-mail alerts, and desktop/mobile-device enabled applications and/or creating new applications, such as map applications for web-enabled phones. Cost-effectively enhancing 511's current features could include supporting third-party efforts to provide innovative dissemination features using 511 data. MTC is committed to ensuring that even as new users are attracted to 511, existing users are also retained. Continuously monitoring and analyzing the usage of different 511 features and the results of user

surveys will provide a foundation for recommendations for how to best apply limited resources to improve 511 usability.

4. Provide a cost-effective 511 service.

MTC must balance the goals of providing an accurate, reliable and highly-used 511 service with the need to operate, maintain, and optimize the system cost-effectively. MTC wants to ensure that any system improvement is weighed against its long-term costs and impacts on the existing system and staff resources. MTC also wants to ensure ongoing mindfulness of strategies that could reduce project costs, increase project efficiencies, and add greater value to the end users.

5. Respond to emergencies quickly and effectively.

MTC wants 511 to be the first place the public will go to for accurate, reliable transportation information in the event of an emergency. Therefore, MTC is committed to maintaining emergency-response data collection and dissemination tools, proactively addressing potential capacity issues, and ensuring well-trained contractor staff are ready to respond at all times.

C. SUPPORTING DOCUMENTATION

MTC has made available the following detailed documents to help proposers understand the 511 Traffic, Real-Time Transit and Phone Systems. These materials are available on the MTC website at http://www.mtc.ca.gov/jobs/. Through project transition a proposer who is not the incumbent will receive any information needed to further clarify the information provided from the documents listed below, and to successfully learn the system and become fully responsible for all project tasks.

Overall Project Background

- *511 – Traveler Information: What's Behind the System?* April 2008
- *MTC Customer Service Programs Awareness & Usage*, May 2008
- *511 Strategic Plan*, April 2006
- *SF Bay Area Regional ITS standards*

Project Management

- *Monthly progress report - sample*
- *Performance monitoring report-– sample*
- *Monthly phone calls and requests data – sample*
- *Weekly phone calls and request data - sample*
- *Screenshot of web tracking tool*
- *511 Usage Report - sample*
- *System Availability Report Sample*
- *511 Performance Monitoring Plan*
- *511 Performance Monitoring SOP - Contract 2009-2010*

Project Equipment Inventory

- *Project Equipment Inventory - San Diego*
- *Project Equipment Inventory - Oakland*

- *TrafficWatch Equipment*
- *Commercial and MTC Software Inventory*
- *511 Communications Network – Oakland*
- *511 Communications Network - San Diego*
- *511 Communications Network Overview*
- *Traveler Information Center Inventory.doc*

Traffic Data Collection and Processing

- *Caltrans-MTC Cooperative Agreement for ETC Equipment Deployment Design for Traffic Watch Software*
- *Design for Caltrans Data Detection Interface (CDDI) Software*
- *Data Collection System Maintenance and Operations Plan*
- *Design for Automatic Link Data Fusion (ALDF)*
- *Design for Link Data Interpolator (LDI)*
- *Design for Caltrans Reverse Data Feed*
- *Design for Smart Data Merge*
- *Design for CORBA-to-Framework Translator*
- *Enhanced Data Fusion System (EDFS) Concept of Operations*
- *Enhanced Data Fusion System Architecture*
- *Detailed Design for Enhanced Data Fusion System (EDFS)*
- *Detailed Design for Enhanced Data Fusion System (EDFS) - Addendum 1*
- *Enhanced Data Fusion System (EDFS) Configuration Management Plan*
- *Enhanced Data Fusion System (EDFS) Framework Data Dictionary*
- *TravInfo Open Messaging Service (TOMS) Overview*
- *Detailed Design for TravInfo Open Messaging Service (TOMS)*
- *Interface Specification for Caltrans Access to TravInfo Data Feed*

Data Dissemination

- *Data Dissemination System Operations and Maintenance Plan*
- *511 Traffic Website Operations and Maintenance Plan*
- *Concept of Operations MY511*
- *Detailed Design Document for MY511*
- *Call Flow Design and Dialog Design Specification*
- *Information Service Provider Agreement*
- *Information Service Provider report – sample*

Real-Time Transit

- *Real-Time Transit System Requirements*
- *Real-Time Transit Hub Signs Requirements*
- *Real Time Transit System Roles and Responsibilities*
- *Extensible Markup Language (XML) Document Type Definitions (DTDs) for Java Message Service (JMS) Implementation*
- *Extensible Markup Language (XML) Document Type Definitions (DTDs) for Web Services Implementation*

Traveler Information Center (TIC) Operations

- *511 Manager User Guide*
- *Caltrans-MTC Cooperative Agreement for TIC Location*
- *TIC Standard Operating Procedures (SOPs)*
- *TIC Operator Manual*
- *TIC Supervisor Standard Operating Procedures (SOPs)*
- *TIC System Administrator Standard Operating Procedures (SOPs)*
- *TIC Staffing Plan*
- *Design Addenda for the Emergency Abbreviated System*

Emergency Response

- *TIC Emergency Operating Procedures (EOPs)*
- *TIC Regional Emergency Checklist*
- *TIC Emergency Checklist*
- *TIC Sub-Regional Emergency Checklist*
- *TIC Emergency Operating Procedures (EOPs)*

II. FUNCTIONAL REQUIREMENTS, SCOPE OF WORK, RENEWABLE SERVICES, PERIOD OF PERFORMANCE AND PAYMENT

A. FUNCTIONAL REQUIREMENTS

Functional requirements for the current system are provided in *Appendix A-2, Functional Requirements*. The requirements describe the level to which the system must be operated and maintained. The functional requirements listed in *Appendix A-2* are specific to the current system and the current technologies used. MTC recognizes that system technology could change in order to meet project goals and that some of the functional requirements may need to be changed to accommodate such changes in technology.

B. SCOPE OF WORK

A preliminary Scope of Work for the project is detailed in *Appendix A, Scope of Work*. Appendix A is organized into seven project elements and six sub-appendices.

1. Project Element I: Project Management
2. Project Element II: Data Collection and Processing
3. Project Element III: Data Dissemination
4. Project Element IV: Traveler Information Center (TIC)
5. Project Element V: Emergency Response
6. Project Element VI: Enhancements
7. Project Element VII: New Contractor Responsibilities
8. Appendix A-1, Key Performance Indicators and Associated Payment Deductions
9. Appendix A-2, Functional Requirements
10. Appendix A-3, System Version and Installation Dates
11. Appendix A-4, Project Deliverables and Approval Process
12. Appendix A-5, Optimizations
13. Appendix A-6, Enhancements

An overview of each project element and Scope of Work appendix is provided below.

1. Appendix A, Project Element I: Project Management

This project element includes Project Planning, Project Administration, Project Coordination, Performance Monitoring, Customer Comment Management and Program Transitions.

Project Planning includes the development of a Five-Year Strategic Plan and Annual Work Plans. Through the strategic planning process, the selected Contractor will assess how new or different technologies, strategies and approaches can meet long-term project needs and goals. The Annual Work plan will specifically define the technologies, strategies and approaches that will be maintained in each contract year, as well as system optimizations and enhancements scheduled for the coming year.

2. Appendix A, Project Element II: Data Collection and Processing

This project element describes the tasks required to operate and maintain the traffic and real-time transit data collection and processing systems. Maintenance includes troubleshooting and

fixing system failures, responding to and recovering from hardware and software outages, repairing malfunctioning equipment, backing up system data, archiving backup media, and modifying the tools that collect and process 511 traffic and real-time transit information to ensure that the system components are performing optimally. Maintenance of the traffic data collection also includes managing purchased data sources to ensure quality and monitoring the system for non-functioning data collection equipment.

3. Appendix A, Project Element III: Data Dissemination

This project element describes the tasks required to operate and maintain the existing data dissemination features and data dissemination channels as well as additional dissemination features and channels that may be developed over the course of the contract.

The selected Contractor will be responsible for operating and maintaining the traffic.511.org pages, for the presentation of real-time transit information on the 511 website and for certain back-end aspects of the 511.org web page.

The selected Contractor will be responsible for all aspects of providing the 511 phone service, including menu changes, recording sessions, transfer capability, voice quality, touchtone back-up system, etc.

The selected Contractor will disseminate traffic data feeds to program partners and to Information Service Providers (ISPs) and will maintain ISP agreements and promote further ISP usage. The selected Contractor will also provide the real-time transit data feed and be responsible for dissemination channels unique to real-time transit, such as transit hub display monitors or to interested transit agencies.

Finally, the Contractor is responsible for the operation and maintenance of email and text message alerts (currently provided through MY 511).

4. Appendix A, Project Element IV: Traveler Information Center (TIC)

The selected Contractor will staff the TIC and fulfill the TIC responsibilities described in the package of *TIC Standard Operating Procedures (SOPs)* and the *TIC Emergency Operating Procedures (EOPs)* (provided on the MTC website at http://www.mtc.ca.gov/jobs/). These SOPs or EOPs are subject to revision and approval by the selected Contractor and MTC. The *511 Operator Manual* and the *511 Manager User Guide* are also provided on the MTC website.

5. Appendix A, Project Element V: Emergency Response

This project element describes the actions the Contractor will take to respond to an emergency in the Bay Area (e.g., earthquake).

6. Appendix A, Project Element VI: Enhancements

"Enhancements" are significant improvements to features, functions, data sources, or the system's underlying technologies. Enhancements will be authorized by Task Orders negotiated and signed by MTC and the Contractor. *Appendix A, Scope of Work* Project Element VI,

describes the steps the Contractor will take to define the implementation of enhancements. Enhancements desired for the contract period are described in *Appendix A-6, Enhancements.*

Changing priorities and funding limitations may prevent certain enhancements in *Appendix A-6* from being pursued during the contract period. In addition, enhancements associated with the website, the phone or real-time transit data collection could be done by another contractor if MTC exercises its option(s) to move provision of these services to another contractor(s), through renewable services.

7. Appendix A, Project Element VII: New Contractor Responsibilities

This project element includes tasks that may be assigned to this Contractor later in the contract period by Contract Change Order. Additional funding would be made available to add these tasks to this Contract and full scopes of work for such tasks would be developed at the time the tasks are added.

8. Appendix A-1 Key Performance Indicators and Associated Payment Deductions

This appendix explains the three performance standards that the Contractor must meet monthly in order to receive full payment.

9. Appendix A-2 Functional Requirements

This appendix lists the functional requirements of the current system and its technologies. The functional requirements explain how the system shall be operated and maintained. MTC recognizes, however, that system technology could change in order to meet project goals and that some of the functional requirements may therefore need to be changed over the course of the contract.

10. Appendix A-3 System Components to Operate and Maintain

This appendix lists the system components that the selected Contractor must operate and maintain until such time that they are retired or replaced. Upon retirement or replacement the selected Contractor will operate and maintain the new components.

11. Appendix A-4 Project Deliverables and Approval Process

This appendix summarizes the required project deliverables and explains MTC's approval process for the acceptance of deliverables.

12. Appendix A-5 Optimizations

This appendix explains what is considered an "optimization" and lists the type of improvements that would be done through the ongoing operations and maintenance budget.

13. Appendix A-6 Enhancements

This appendix explains what is considered an "enhancement" and lists potential enhancements that could be undertaken during the course of the contract period.

C. RENEWABLE SERVICES

MTC has identified the following tasks as "renewable," which means that MTC may elect not to renew one or more of the tasks prior to the beginning of a fiscal year starting in FY2010-11.

- Collect and process real-time transit data (Task II.B)
- Operate and maintain 511 web services (Task III.A)
- Operate and maintain the 511 phone service (Task III.B);
- Provide the real-time transit data feed and disseminate real-time transit data to a network of transit hub signs (Task III.D); and
- Provide text-message and email data dissemination.

MTC has identified these tasks as renewable to allow future flexibility and test potential synergies with other 511 contractors (e.g., combine real-time transit tasks with the 511 transit contractor) or to allow MTC to seek more specialized providers (e.g., telephony). Identifying certain tasks as renewable is not intended to penalize poor contractor performance.

Any task(s) that is not renewed would be removed from the Contract by Change Order. The payment for such task would then either be available to be moved to another task by Change Order or taken out of the Contract.

Nothing in this section is intended to limit in any way MTC's right to terminate the Contract in part without cause under *Appendix H, MTC 511 Traffic Contract Terms and Conditions*, Article 14.1.

D. PERIOD OF PERFORMANCE

The initial period of performance for this contract will be five (5) years anticipated to start on July 1, 2009 and continue through June 30, 2014. MTC will have the sole option to extend the contract for up to five (5) additional years, in increments of MTC's choosing, depending on MTC's satisfaction with the selected project team and overall changes to the 511 Program.

If the procurement results in a change in contractors, there will be a transition period of up to six (6) months during which MTC's incumbent contractor and the new Contractor will both work on the project. During this period, the new Contractor will be responsible for learning the system from the incumbent contractor and taking over day-to-day operations and maintenance from the incumbent contractor according the transition plan finalized by the selected Contractor. MTC wants to ensure a seamless, cost-effective project transition.

E. PAYMENT

1. Funding

A total of $32,140,000 is available for this contract for the five-year term as follows (in 1,000s of dollars escalated for inflation at 3% per year).

FY09-10	FY10-11	FY11-12	FY12-13	FY 13-14	Total
$5.34	$7.64	$6.38	$6.37	$6.41	$32.14

The annual budgets include the following operations and enhancement assumptions. These assumptions were made to facilitate long-term MTC planning and do not represent a prescribed course of action. These assumptions are provided to clarify how the budget numbers in the table above were derived.

FY2009/10 Assumptions:

Annual operations and optimizations of $4.04M

Enhancements of $1.3M, including:

- Upgrade the Enhanced Data Fusion System (EDFS) and related servers
- Add up to seven new transit agencies to 511 Departure Times
- If needed, post real-time transit stop identification numbers at stop locations
- If needed, add capacity for 511 Web
- Other enhancements

FY2010/11 Assumptions:

Annual operations and optimizations of $4.26M

Enhancements of at least $3.38M, including:

- If, based on analysis to be completed in FY 08/09, determined to be necessary, build emergency redundant site
- Add new types of data provided by other agencies (e.g., arterial data)
- Replace one-half of the Traffic Watch readers
- Add one new transit agency to 511 Departure Times
- Add hardware and software for additional phone capacity
- Other enhancements

FY2011/12 Assumptions:

Annual operations and optimizations of $4.62M

Enhancements of at least $1.76M including:

- Replace one-half of the Traffic Watch readers
- Replace phone servers
- Replace web servers
- Replace Real-time Transit servers
- If needed, add capacity for 511 web
- Other enhancements

FY2012/13 Assumptions:

Annual operations and optimizations of $4.83M

Enhancements of at least $1.54M including:

- If needed, add hardware and software for additional phone capacity
- Replace TIC workstations
- If needed, migration to new voice recognition system
- Other enhancements

FY2013/14 Assumptions:
Annual operations and optimizations of $5.10M
Enhancements of at least: $1.31M including

- Upgrade the TIC EDFS
- If needed, add web capacity and replace servers
- Other enhancements

2. Historical Cost Information

The following is a breakdown by task of the current year FY2008-09 operating budget, which was approximately $4 million (note that real-time transit costs were relatively low this year and are expected to increase as more transit:

Project management	10%
Data collection	25%
Data dissemination	35%
Real-time transit	5%
TIC Operations	25%

The following provides select historical cost information for FY2007-08:

- The average monthly cost of TIC Operations was $77,000.
- The average monthly cost of paying for the 511 phone lines was $12,000.
- The cost for purchased data from SpeedInfo is $110/month/sensor. The project receives data from approximately 340 SpeedInfo sensors.
- The monthly average fees associated with the AIS hosting services are as follows:

Internet Access	$900
Cabinet Rental(s)	$1,700
Power	$4,800
SIP Traffic	$19,000
Total	**$26,400**

- The average historical cost to install a TrafficWatch reader is approximately $47,000 including equipment and labor. There are no costs for TrafficWatch licenses or for use of Caltrans right-of-way.

3. Compensation of Contractor

MTC will pay a fixed monthly lump sum for the performance of tasks in Project Elements I through IV. If a "renewable task" were not renewed, the price for performing that task, plus its proportionate share of the project management price, would be subtracted from the lump sum fees payable to the Contractor.

MTC reserves the right to change the payment terms beyond the initial five-year term of the contract if a more suitable payment mechanism is agreed upon.

Project Element V, Emergency Response, will be paid based on a time and materials payment structure. Although the Contractor is expected to respond to emergencies as soon as it receives

notification from the Project Manager, payment will require a written Notice to Proceed from MTC, which will include a not to exceed amount.

Enhancements in Project Element VI will be implemented following the execution of Task Orders between MTC and the Contractor. Task Orders will specify the budget and payment provisions for the work to be performed (e.g., time and materials or deliverables-based). Once MTC and the Contractor agree to the terms of a Task Order, it will be executed by both parties and work will begin.

The Contractor shall perform all tasks and subtasks in Project Elements I through IV within the budget stated in II.E.1 above. Project Element V, Emergency Response, will most likely be paid for with funding added to the contract following an emergency. If additional funds are not made available following an emergency, funding will come from the Project Element VI budget, and enhancements will be deferred.

After budgeting for Project Elements I through IV, the remaining funds will be dedicated to Project Element VI, Enhancements. MTC does not have full funding for all Project Element VI enhancements listed in *Appendix A-6*. In certain cases, MTC may seek additional funding to complete tasks in Project Element VI.

Tasks in Project Element VII, New Contractor Responsibilities are not included in the budget stated in II.E.1 above and are subject to the approval of MTC and future budgets. If approved, they will be incorporated into the contract through a Change Order.

The Scope of Work requires the selected Contractor to explore and implement approved strategies to add value to the contract, which could include generating project revenue. Any added value would be used to offset project costs or pursue new project investments.

The following table summarizes this discussion.

Scope of Work Project Element		**Budget**	
	Payment Method	**In Funded Contract**	**Additional $ to be Identified**
I - IV	Lump Sum	√	
V, Emergencies	Time & Materials		**Probably**
VI, Enhancements	TBD	**Partially**	**Possibly**
VII, New Con. Resp.	TBD		√

3. Contractor Performance Payment Deductions

MTC intends to link Contractor performance to payment by reducing the Contractor's lump sum payment amount for Project Elements I – IV if performance requirements are not met as described in *Appendix A-1, Performance Standards and Payment Deductions*. The current 511 systems meet the performance standards. Payment deductions will not take affect until after the transition period (if applicable) is completed. The performance standards are summarized here:

a. **System Availability (Phone and Web)** – The 511 phone and website must be available to at least 99.72% of the time (less than 2 hours per month unavailable for the two systems combined). System availability refers to the time the system is running without experiencing Total or Major Failures. These failures are described in *Appendix A-1*.

b. **System Accuracy** – System accuracy shall be at least 92% each month based on the accuracy of reported driving times and incidents compared to ground truth driving times and actual incident observations; real-time transit data inputs compared to outputs; and TIC compliance with SOPs.

c. **Voice Response Quality** – The telephone system shall accurately recognize and respond to voice commands at least 70% of the time in any given month as measured by a phone-system- (Nuance) generated report provided to MTC by the selected Contractor.

In addition, MTC will identify and negotiate Contractor performance milestones for the completion of select enhancements, or select tasks within enhancements, at the time the Task Orders are written. MTC intends to reduce the Contractor's payment amount when achievement of a performance milestone is delinquent.

III. FORM OF PROPOSAL

Proposers must submit an original and fifteen (15) hard copies, one electronic PDF version and one electronic Word version (plus Excel for the cost proposal) of their proposals by Monday, December 1, 2008, at 12:00 PM (Pacific Time) to be considered. Proposals shall be submitted to:

Carol Kuester
Project Manager
Metropolitan Transportation Commission
Joseph P. Bort MetroCenter
101 Eighth Street
Oakland, CA 94607-4700

In furtherance of MTC's resource conservation policy, proposers are asked to print proposals back to back and are encouraged to use recycled paper for all proposals and reports.

Proposal content and completeness are most important. Proposals must be typed with a minimum 12-point font. Text should be written on 8 ½" by 11" paper, although graphics and spreadsheets may be provided on paper up to 11" x 17". Proposals shall not exceed 200 pages, excluding proposal covers, section dividers, letter of transmittal, title page, table of contents, change-bar Scope of Work, resumes, and forms required in *Appendices I* through *L-3*.

Each proposal should include:

A. LETTER OF TRANSMITTAL

The transmittal letter should be signed by an official authorized to solicit business and enter into contracts for the firm and include the name and telephone number of a contact person, if different from the signatory. It should also include a statement that the proposal (or Best and Final Offer (BAFO), if applicable) is a binding offer to contract with MTC according to the requirements of this RFP for a period of one hundred fifty (150) days from the due date for submission of proposals (and/or BAFOs).

B. TITLE PAGE

The title page should include the RFP subject, the name of the proposer's firm, address, telephone number, name of contact person, and the date.

C. TABLE OF CONTENTS

The table of contents should provide a clear identification of the material by section and page number.

D. INTRODUCTION

Provide a general description of your knowledge of the Bay Area's existing 511 traffic and real-time transit data collection and processing systems and 511 data dissemination system and their hardware and software; your understanding of the goals of the program and their relationship to

the Scope of Work; and what you see as the biggest challenges for the program during the next five years.

E. FIRM DESCRIPTION, KEY PERSONNEL, AND TEAM ORGANIZATION

Describe the firms on the team (including the prime Contractor, subcontractors and/or joint venture partners), including location of offices and headquarters, number of employees, number of years in business, number of years the firm has been profitable, and areas of business. Describe the roles of the subcontractors, their specific responsibilities and how their work will be supervised and coordinated. Describe where the firms on the team have worked together before.

Identify a single project manager who will have overall authority for all aspects of contract delivery, regardless whether the team is proposed as a prime-sub relationship or a joint venture.

Identify key staff proposed to work on the project and identify the key staff member proposed to lead each task within the Scope of Work (i.e., "task leads"). Identify which staff will be local and which will be based outside the San Francisco Bay Area. Also, summarize their other known project commitments and discuss how you will ensure that each task lead will have sufficient time to dedicate to this effort.

Provide a key personnel staffing organization chart as well as a TIC staffing organization chart showing lines of accountability and how communication will flow within the team and to MTC. Once selected, the Contractor may not change the proposed key staff or location(s) without written approval from MTC.

F. QUALIFICATIONS AND REFERENCES

Describe your team's qualifications and the qualifications of the prime contractor and all key personnel (including subcontractors' personnel) as they relate to the tasks required by *Appendix A, Scope of Work*. Provide sufficient detail to confirm that your team has the necessary qualifications to provide all the required services, paying particular attention to the following abilities:

- Project management, including:
  - Overall project management
  - Strategic planning,
  - Development and adherence to scope, schedule and budget, and
  - Overall understanding of and ability to meet 511 end-user requirements.
- Data Collection, including"
  - Field traffic data collection,
  - Real-time transit data collection expertise, and
  - Data integration and data processing.
- Data Dissemination, including:
  - Telephony expertise needed to keep the 511 phone system functioning optimally and cost-effectively,

  - Website hosting, networking and design expertise needed to keep the website functioning optimally and cost-effectively, and
  - Development of website and other applications using 511 data.
- Operations, including:
  - Provision of 24/7 TIC operation and management, and
  - Provision of 24/7 operational and technical support to MTC and guaranteed maintenance response times per the functional requirements.

For the proposed project manager and task leads, describe all relevant technical and project management knowledge and skills and how they relate to this project.

Provide a maximum two-page resume for each key team member (including key personnel working for a subcontractor). Resumes may be provided as an appendix to the proposal and will not count toward the page-count limit.

Provide at least three references from previous projects similar to this project, or elements of this project, on which the firm and key project staff worked. Include a brief project description, the project title, duration, budget, sponsoring agency, sponsor project manager, and roles played by individuals proposed for this contract. Include the name of the agency for which the work was performed, contact person name, telephone number, and year(s) that the work was done. Provide references who can comment on the team's ability to assume responsibility to operate and maintain existing technically complex operations, website development, management and design expertise, one reference who can comment on the team's telephony expertise, one who can comment on the team's software development, integration and troubleshooting capabilities, and one who can comment on the team's overall project management and strategic planning abilities. At least one of the references should be from a public sector agency.

At least one reference is required for each subcontractor with a proposed budget over $100,000 total for this contract.

Provide a summary of all contracts that members of your team (including subcontractors) have held with MTC in the past three years, including a brief description of the scope of work, the contract amount, and date of execution.

G. WORK PLAN

Explain how the tasks and subtasks in *Appendix A, Scope of Work* will be accomplished and your overall approach to managing the work. Proposers may refine or modify the tasks and subtasks identified in *Appendix A* as long as the proposers' work plan addresses the project goals described in I.B Project Goals and can meet the performance standards and functional requirements described in *Appendix A-1, Performance Requirements and Payment Deductions* and *Appendix A-2, Functional Requirements.* Explain the rationale for suggested refinements or modifications and provide associated deliverables.

Proposers must identify any Work Product that they want *not* to fall within the ownership provisions of *Appendix H, MTC 511 Traffic Contract Terms and Conditions* Article 5.1.2 as a

Proprietary Work Product in the Proposal. Specifically address the following in your proposed work plan:

1. Project Management

a. Project Planning

In anticipation of the development of a five-year Strategic Plan in Task I.A.1, discuss your approach to the following and provide recommendations as requested. While MTC has called out the following aspects of the project separately, it is recognized that they may be related.

(i) Technology and Industry Trends

Describe how you will stay informed of industry trends and propose how you will provide guidance to MTC about changing technology and keeping 511 current and relevant. Describe your vision for how traveler information programs will change in the next ten years.

(ii) Data Collection Strategy

Describe your vision of the future of data collection and how MTC's current mix of data collection methods could or should change during the course of this contract period and why. MTC is open to changing the system technology currently used.

If you are proposing a change to MTC's data collection approach, explain the pros, cons and implications of possible data collection strategy changes (e.g., control, quality, ability to provide data to others, capital cost versus recurring cost, flexibility, etc.) and how they could be accommodated. Discuss the reasons for, and implications of, not making changes during the course of the contract period. Discuss your thoughts about relying on proxy data sources and your approach to using data interpolated by the LDI (Link Data Interpolator) or the Smart Data Merge (SDM).

(iii) Value-Added Services

Recommend specific strategies for implementation and/or further exploration to add value to the contract and explain how partnerships, relationships, or incoming revenue would be managed. Discuss your experience with, and knowledge of, strategies to add value to what 511 can provide without increasing the project budget. Strategies could include partnerships, service exchanges, or generating revenue from advertising or data sales. Discuss the pros and cons of the strategies and the estimated financial worth of different strategies, including gross and net revenues if applicable.

Discuss your approach to implementing your recommendations and implications for project management and budgeting. Discuss how you propose funding any up-front costs required to develop value-added strategies. Strategies should be revenue-neutral or revenue generating within the five-year contract base period.

(iv) Cost Controls and Reduction

Discuss strategies or approaches to reduce project costs and/or make the project more cost-effective, e.g., changing, scaling down, streamlining, optimizing or eliminating certain features or functions; changing the approach to certain tasks; or altering or eliminating tasks within the Scope of Work. Describe how these strategies or approaches would impact MTC's program goals. Describe the trade-offs associated with the cost-cutting strategies, the magnitude of costs that could be saved, and your level of confidence that the strategies would be effective.

(v) System Replacement Plan (See Appendix B)

MTC has provided a table in *Appendix B* showing the version and installation dates of system components to provide an understanding of potential system replacement needs. Discuss your understanding of replacement needs in general and how your ideas for data collection, optimizations and enhancements affect system equipment needs, including whether you would maintain MTC's existing custom 511 software or would convert to different software tools. Recommend replacement of equipment as you feel best meets project needs.

Explain the rationale for your equipment replacement strategy, the budget and maintenance implications, how the strategy will meet contract goals and performance standards, and functional requirement implications. Discuss any privacy restrictions on use, or other public policy issues that a new technology may present.

If you are proposing different software for 511 or proposing to change out MTC proprietary software for a new product, discuss the proprietary restrictions on the product and the Contractor's ability to comply with MTC's requirements outlined in *Appendix H*, *MTC 511 Traffic Contract Terms and Conditions*. Specifically identify whether such software will be MTC Software or Restrictive as defined in Article 5.2 of the Terms and Conditions.

b. Project Administration

Discuss your plans for a local office and the staff that would work from this office. Describe how you would provide a configuration management tool for software, and how this tool would be used. Please note that for auxiliary software (e.g., project management tools) MTC discourages the provision of custom designed software, modified versions of available software, or specialized software no longer commercially available or for which interfaces do not exist. Discuss your approach to managing contract documentation.

c. Project Coordination

Discuss how you will coordinate locally-based and non-locally based project team members so that all member have a full understanding of what is occurring with the project and how their individual work impacts work being conducted by other team members. Discuss how non-locally based teams are available, responsive and will have a full understanding of the need to respond to real-time operational issues or problems. Discuss how you will ensure the required staff presence at the hosting facility per the functional requirements in *Appendix A-2*.

d. Performance Monitoring

Based on the sample 511-user statistics reports available at http://www.mtc.ca.gov/jobs/, discuss any ideas to improve the reporting tools, or the report content or formats. Discuss your approach to monitoring 511 systems independently and in addition to MTC's performance monitoring process.

e. Customer Comment Management

Explain your approach to managing 511 customer comments. Discuss your strategy for categorizing and using comments as a planning resource. Explain the staff resources you will dedicate to responding to comments, thresholds for response-worthy comments, and policies for timely response.

f. Transition

MTC has provided a preliminary transition plan in *Appendix C, Preliminary Transition Plan*. Any team that is not the same as the incumbent Contractor team should comment on this plan based on your understanding of transition needs. Describe your approach to transition, including additional detail to the preliminary plan or alternative organization, if applicable. Discuss staff development, office logistics and timeline or phasing of assuming full responsibility for different functions.

2. Data Collection and Processing

Discuss the most important aspects of operating and maintaining the 511 Traffic and Real-time Transit data collection and data processing systems. Identify areas of concern, if any, related to the current collection system and explain how you would address them. If you are recommending use of a new or additional technology for traffic data collection, discuss your approach to implementing this change and implications of the use of a new technology on ongoing operations and maintenance.

Discuss how you will monitor data collection systems 24/7. Discuss your approach to troubleshooting and fixing problems and how you will set priorities for individual maintenance items. Discuss your approach to handling and ensuring accuracy of the large amount of route names, route directions, stop names, stop identification numbers, etc. in the real-time transit data. Discuss your approach to configuration management for the data collection system.

Describe your ideas for optimizing the traffic and real-time transit data collection systems. Discuss how your team will provide the staffing capacity and capabilities to pro-actively address traffic and real-time transit data collection system problems and improve the systems through optimizations. Discuss how you will ensure that small improvements and adjustments can be made even when new development may be occurring.

3. Data Dissemination

Discuss the important aspects of managing the existing data dissemination channels and features and describe your approach to providing excellent customer service and systems that meet the performance standards. Identify areas of concern, if any, related to the current dissemination system and explain how you would address them.

Describe your ideas for optimizing the data dissemination channels and data dissemination features. Discuss how your team will provide the staffing capacity and capabilities to nimbly fix traffic and real-time transit data collection system problems and improve the systems through optimizations. Discuss how you will ensure that small improvements and adjustments can be made even when new development may be occurring.

Discuss your approach to providing data to Information Service Providers, including the merits of proactively marketing the 511 data feed and strategies to understand 511 usage as a result of the data feed.

4. The Traveler Information Center (TIC)

Describe your approach to managing and operating the TIC. Explain how TIC Operations will be integrated into other Contractor functions. Discuss your understanding of the TIC SOPs (provided at http://www.mtc.ca.gov/jobs/) and how you will ensure they are followed and updated. Discuss your approach to recruitment and retention of TIC staff, specifically at a unionized shop. Explain how your TIC staffing plan will provide optimal coverage. Discuss any ideas you have for changing TIC operations. Discuss how you will ensure operations are not negatively impacted when enhancements are implemented.

5. Emergency Response

Discuss your understanding of the emergency response functional requirements and the TIC Emergency Operating Procedures (EOP) (available at http://www.mtc.ca.gov/jobs/). Describe your approach to meeting the requirements and following the EOPs. Discuss your ideas for improving the requirements and procedures to ensure a more nimble emergency response. Discuss how you will staff the emergency response effort.

6. Enhancements

Based on your team's vision for 511 you described in your "Project Planning" approach, as well as the overall approach you have described, discuss your enhancement ideas for data collection and processing, data dissemination features, and/or data dissemination channels. Identify the subset of enhancements listed in *Appendix A-6, Enhancements*, you have budgeted to implement during the five-year base project contract and those you have not. Describe your approach to setting priorities and budgeting for enhancements. Discuss which are the most important to implement first and why. Describe you ideas for enhancements not included in *Appendix A-6, Enhancements*.

Discuss how you will anticipate and manage the impacts of enhancements on existing operations, both during the development process and after the development has been fully integrated.

Specifically, describe your approach to:

- Upgrading or replacing the Enhanced Data Fusion System (EDFS) to make it a web-based application, simplify data entry, and provide additional functionality, and
- Upgrading the 511 traffic web page.

Based on the equipment replacement recommendations you provided in your "Project Planning" approach, as well as the overall approach you have described, discuss the enhancements you will make to manage life cycle replacement of system equipment.

H. PROPOSED REVISIONS TO SCOPE OF WORK

Based on your team's proposed work plan, provide a change-bar version of the Scope of Work provided in *Appendix A* that identifies where your proposed approach alters the preliminary Scope of Work. The Scope of Work is available as a Word document on MTC's website at http://www.mtc.ca.gov/jobs/. The change-bar version of the Scope of Work may be provided as an appendix to the proposal and will not count toward the page-count limit.

I. PROJECT SCHEDULE

Proposers should, at a minimum, provide a five-year schedule showing when proposed enhancements (including equipment replacement) and other project recommendations would be implemented and how long the work would require. Proposers should base this schedule on their proposed Work Plan (See Section III.G) and *Appendix A-6, Enhancements*.

Most of the tasks in *Appendix A, Scope of Work* are ongoing across the five-year project period. The Scope of Work, as well as *Appendix A-4, Project Deliverables and Approval Process*, provides specific dates for when deliverables supporting on-going tasks will be due. If proposers recommend alternatives to specific due dates, these should be included in the five-year schedule.

Because the need for specific optimizations will change continuously, and because the purpose of defining optimization work is to ensure that the Contractor has capacity to nimbly address such problems, a schedule showing when specific optimizations will be accomplished is not necessary. However, proposers are welcome to recommend a timeline for accomplishing specific optimizations within their five-year schedule. See *Appendix A-5, Optimizations*.

J. COST PROPOSAL

Provide the cost proposals listed below. Budgets should reflect any anticipated cost increases (e.g., due to salary increases, cost of living, etc.) through FY2013-14. The selected Contractor will be held to its proposed budgets for the course of the project period. The proposed budgets shall become part of the resulting contract.

While the total budget amounts provided in Section II.E.1 (e.g., $5.34 million for FY2009-10; $32.14 million for five years) are accurate, the more detailed assumptions provided in II.E.1 (e.g., $70K to add web capacity in FY2009-10) were made to facilitate long-term MTC planning and do not represent a prescribed course of action. Proposers should make assumptions to accurately reflect their proposed work plans.

Directions for submitting each cost proposal are provided in the cost proposal forms.

1. Project Budget by Year

Section II.E.1, Funding, described the annual and total funding available for this project over the contract period. Proposers may propose annual budgets that are different from what is shown in Section II.E.1, as long as the sums of the cumulative annual budgets do not exceed the sum of cumulative funding available up to but not beyond that year. In other words, a proposer may defer spending a portion of the available budget in a particular year and then apply these funds to a *subsequent* year.

Appendix E, Format for Presentation of Project Budget by Year provides a sample format showing how the Project Budget by Year should be presented. This form is also available electronically in Excel format at http://www.mtc.ca.gov/jobs/. Note that this form includes a line to indicate additional revenue generated or value of value-added services provided to evaluation of proposals.

2. Hourly Rates

Complete *Appendix F, Rate Sheet* to identify the proposed hourly rates for each staff member. The hourly rates should be broken out by description of costs to include, at a minimum, salary, overhead and profit for each year of the contract term. These rates will be subject to pre-award audit. These rates will be used for Task Orders with time and materials payment structures and for time spent responding to emergencies, as well as to understand how the monthly lump sum payment price was calculated. Once accepted, billed rates must not exceed accepted rates. These rates will also be used to demonstrate how the proposer's monthly lump sum payment was calculated per *Appendix G*. The rate sheet is also available electronically in Excel format at http://www.mtc.ca.gov/jobs/.

3. Detailed Task/Subtask Budget

Complete *Appendix G, Format for Development of Annual Lump Sum Budgets and Project Budget by Task* per the specific instructions and guidelines provided in *Appendix G*. In general, the cost proposal shall:

- Clearly state the hours by task for key personnel.
- Include *all* costs associated with performance of Project Elements I through IV in the lump sum budget (Project Management, Data Collection, Data Dissemination and TIC Operations).
- Include adequate budget for optimization work as part of the lump-sum operations fee and clearly state how much budget is reserved for optimization work each year.
- Not reserve any budget for Project Element V, Emergency Response.
- Apply remaining budget to Project Element VI, Enhancements and clearly state how much budget is reserved for enhancements, including equipment purchase, and other specific enhancements to the extent possible. (Note: the scoping, design, implementation and/or integration of any one enhancement can span more than one fiscal year.)

This form is available electronically in Excel format at http://www.mtc.ca.gov/jobs/. MTC reserves the right to negotiate the amount of the lump sum payment for Project Elements I through IV.

4. Contractor Performance Payment Deductions

Appendix A-1, Key Performance Indicators and Associated Payment Deductions explains how MTC will reduce Contractor's lump sum payment for Project Element I – IV if performance standards are not met. If desired, propose alternative or additional strategies for linking Contractor performance to payment and explain why these are a better or more desirable means of achieving MTC's goals. If MTC chooses to adopt an alternative or additional strategy, it will be included in a Request for Best and Final Offer (BAFO).

K. WRITING SAMPLE

Provide a technical document written by one or more of the key personnel identified for this project and that was written under the leadership of the proposed Project Manager.

L. CALIFORNIA LEVINE ACT STATEMENT

Submit a signed Levine Act statement (*Appendix J).*

M. LOBBYING AND DEBARMENT CERTIFICATE

Submit completed Lobbying and Debarment certificates (*Appendix K-1 & K-2*).

N. SUBCONTRACTOR INFORMATION FORM

Submit a completed *Appendix K-3, Bidders List of Subcontractors (DBE and Non-DBE), Part I and II.*

IV. PROPOSAL EVALUATION

A. REVIEW FOR GENERAL RESPONSIVENESS

MTC staff, in consultation with the MTC Office of General Counsel, will conduct an initial review of the proposals for general responsiveness. Any proposal that does not include enough information to permit the evaluators to rate the proposal in any one of the evaluation factors listed below will be considered non-responsive. A proposal that fails to include one or more items requested in Section III, Form of Proposal, may be considered complete and generally responsive, if evaluation in every criterion is possible.

MTC reserves the right to accept or reject any or all proposals submitted, waive minor irregularities in proposals, request additional information or revisions to offers, and to negotiate with any or all proposers.

B. EVALUATION FACTORS

A panel of MTC and other public agency staff will evaluate responsive proposals. Proposals will be evaluated on the basis of the following four evaluation factors. The first three are of equal importance; the fourth of less relative importance. Listed under each evaluation factor are aspects of the proposals that the panel will consider in its evaluation. These will not be weighted or evaluated independently.

1. Approach

- Thoroughness, appropriateness, clarity, logic, and risk of proposer's approach to carrying out the tasks listed in *Appendix A, Scope of Work*. All tasks within the Scope of Work are of equal importance.
- Logic, risk and appropriateness of proposed schedule.
- Logic, risk and appropriateness of proposed team structure, coordination, communication flow, and project office location.

Areas of interest to MTC include, but are not limited to, the specific items that proposers are requested to address in their proposed Work Plans.

2. Team Qualifications, Experience and Key Personnel

- Qualifications and experience for the lead firm, Project Manager, the team, and the key project staff in projects similar to the Scope of Work of this RFP and covering the required skill sets.
- References for the lead firm, major subcontractors, and key project staff for projects of similar size and scope and with public agencies.

3. Resource Availability and Allocation

- Assignment of key personnel among project elements, tasks, and subtasks.
- Availability of key personnel to support this project, including team depth and plans for back-up personnel.

- Appropriateness of labor hour distribution.
- Appropriateness and clarity of the lump sum payment calculation including the component parts (e.g., rates for labor, overhead and profit).
- Appropriateness of allocation of non-labor resources.
- Cost effectiveness, including value-added services.

4. Communications

- Clarity, structure, and readability of the proposal.
- Ability to speak and present clearly (as demonstrated in discussions).
- Writing sample.

Following the initial evaluation, the panel may elect to recommend award to a particular proposer, with or without discussions, or may enter into discussions with a "short list" of proposers, consisting of those proposers reasonably likely, in the opinion of the panel, to be awarded the contract.

C. PROPOSER DISCUSSIONS

The purpose of discussions with each proposer on the "short-list" will be to identify specific deficiencies and weaknesses in its proposal and to provide the proposer with the opportunity to consider possible approaches to alleviating or eliminating them in a BAFO. These deficiencies or weaknesses may include such things as technical issues, management approach, cost, or team composition. Discussions may take place through written correspondence and/or face-to-face meetings. The Project Manager, as well as other key personnel identified by the evaluation panel, will participate in any discussions.

MTC reserves the right to not convene discussions and to make an award on the basis of initial proposals, with or without interviews.

D. REQUEST FOR BEST AND FINAL OFFERS (BAFO)

Following the discussions, MTC will give the proposers with whom discussions were held the opportunity to revise their written proposals to address the concerns raised during discussions through issuance of a Request for BAFO. A Request for BAFO may also revise the RFP or Contract provisions. Following receipt of the BAFOs, the evaluation panel will re-evaluate the proposals, as revised, against the evaluation criteria. The evaluation panel will then recommend a BAFO to the Executive Director. If approved by the Executive Director, the recommendation will be presented to the MTC Operations Committee for approval.

V. GENERAL CONDITIONS

A. LIMITATIONS

This RFP does not commit MTC to award a contract or to pay any costs incurred in the preparation of a proposal in response to this RFP.

B. AWARD

Any award made will be to the Contractor whose proposal is most advantageous to MTC based on the evaluation criteria outlined above.

C. BINDING OFFER

A signed proposal submitted to MTC in response to this RFP shall constitute a binding offer from Contractor to contract with MTC according to the terms of the proposal for a period of one hundred fifty (150) days after its date of submission, which shall be the date proposals or BAFO, if applicable, are due to MTC.

D. CONTRACT ARRANGEMENTS

The contract payment terms will be monthly lump sum payment for ongoing services, which includes all tasks in Project Elements I through IV. The lump sum payment will be based generally on the selected Contractor's proposed budget as provided in *Appendix G*, although MTC reserves the right to negotiate changes with the selected Contractor. If the Contractor is called upon to respond to an emergency (Project Element V), the Contractor will be paid on a time and materials basis for this effort. Project Element VI will be paid based on the payment terms set out in the Task Orders for these tasks.

E. SELECTION DISPUTES

A proposer may object to a provision of the RFP on the grounds that it is arbitrary, biased, or unduly restrictive, or to the selection of a particular Contractor on the grounds that MTC procedures, the provisions of the RFP or applicable provisions of federal, state or local law have been violated or inaccurately or inappropriately applied by submitting to the Project Manager a written explanation of the basis for the protest:

1) No later than five (5) working days prior to the date proposals are due, for objections to RFP provisions;
2) No later than three (3) working days after the date on which the proposer is notified that it was found to be nonresponsive; or
3) No later than three (3) working days after the date on which contract award is authorized or the date the proposer is notified that it was not selected, whichever is later, for objections to contractor selection.

Except with regard to initial determinations of nonresponsiveness, the evaluation record shall remain confidential until the MTC Operations Committee authorizes award.

Protests must clearly and specifically describe the basis for the protest in sufficient detail for the MTC review officer to recommend a resolution to the MTC Executive Director.

The MTC Executive Director will respond to the protest in writing, based on the recommendation of a staff review officer. Authorization to award a contract to a particular firm by the MTC Operations Committee shall be deemed conditional until the expiration of the protest period or, if a protest is filed, the issuance of a written response to the protest by the Executive Director.

Should the protesting proposer wish to appeal the decision of the Executive Director, it may file a written appeal with the Commission, no later than three (3) working days after receipt of the written response from the Executive Director. The Commission's decision will be the final agency decision.

F. PUBLIC RECORDS

This RFP and any material submitted in response to this RFP are subject to public inspection under the California Public Records Act (Government Code § 6250 *et seq*.), unless exempt by law. Other than proprietary information or other information exempt from disclosure by law, the content of proposals submitted to MTC will be made available for inspection consistent with its policy regarding Public Records Act requests.

G. DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION

1. Terms As Used In This Document

a. "Disadvantaged Business Enterprise" or "DBE" means a for-profit small business concern as defined in Title 49, Part 26.5, Code of Federal Regulations (CFR).

b. "Bidder" also means "proposer" or "offerer."

c. "Agreement" also means "Contract."

d. "Agency" also means the local entity entering into this contract with the Contractor or Consultant.

e. "Small Business" or "SB" is as defined in 49 CFR 26.65.

2. Authority and Responsibility

a. DBEs and other small businesses are strongly encouraged to participate in the performance of Agreements financed in whole or in part with federal funds (See 49 CFR 26, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs"). The Contractor should ensure that DBEs and other small businesses have the opportunity to participate in the performance of the work that is the subject of this solicitation and should take all necessary and reasonable steps for this assurance. The bidder/proposer shall not

discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontracts.

b. *Bidders/Proposers are encouraged to use services offered by financial institutions owned and controlled by DBEs.*

3. Submission of DBE Information

"Local Agency Proposer/Bidder-DBE (Consultant Contracts) Information" form, *Appendix K-3* will be included in the Agreement documents to be executed by the successful bidder. The purpose of the form is to collect data required under 49 CFR 26. Even if no DBE participation will be reported, the successful bidder must execute and return the form.

4. DBE Participation General Information

It is the bidder's responsibility to be fully informed regarding the requirements of 49 CFR, Part 26, and the Department's DBE program developed pursuant to the regulations. Particular attention is directed to the following:

a. A DBE must be a small business firm defined pursuant to 13 CFR 121 and be certified through the California Unified Certification Program (CUCP).

b. A certified DBE may participate as a prime contractor, subcontractor, joint venture partner, as a vendor of material or supplies, or as a trucking company.

c. A DBE joint venture partner must be responsible for specific contract items of work or clearly defined portions thereof. Responsibility means actually performing, managing and supervising the work with its own forces. The DBE joint venture partner must share in the capital contribution, control, management, risks and profits of the joint venture commensurate with its ownership interest.

d. A DBE must perform a commercially useful function pursuant to 49 CFR 26.55; that is, a DBE firm must be responsible for the execution of a distinct element of the work and must carry out its responsibility by actually performing, managing and supervising the work.

e. The bidder (prime contractor) shall list only one subcontractor for each portion of work as defined in their bid/proposal and all DBE subcontractors should be listed in the bid/cost proposal list of subcontractors.

f. A prime contractor who is a certified DBE is eligible to claim all of the work in the Agreement toward the DBE participation except that portion of the work to be performed by non-DBE subcontractors.

5. Resources

a. The CUCP database includes the certified DBEs from all certifying agencies participating in the CUCP. If you believe a firm is certified that cannot be located on the database, please contact the Caltrans Office of Certification toll free number 1-866-810-6346 for assistance. Bidder/Proposer may call (916) 440-0539 for web or download assistance.

b. Access the CUCP database from the Department of Transportation, Civil Rights, Business Enterprise Program website at: http://www.dot.ca.gov/hq/bep/.

- Click on the link in the left menu titled Find a Certified Firm
- Click on Query Form link, located in the first sentence
- Click on Certified DBE's (UCP) located on the first line in the center of the page
- Click on Click To Access DBE Query Form
- Searches can be performed by one or more criteria
- Follow instructions on the screen
- "Start Search," "Requery," "Civil Rights Home," and "Caltrans Home" links are located at the bottom of the query form

H. PROMPT PAYMENT OF SUBCONTRACTORS

Under 49 CFR Part 26, Contractors are required promptly to pay subcontractors (DBE and non-DBE) all amounts to which the subcontractors are entitled for work that has been satisfactorily performed and for which the Contractors have received payment, in accordance with the terms of the applicable subcontracts. (See 49 CFR § 26.69.) Accordingly, Contractor shall pay its subcontractors within ten (10) business days from receipt of each payment made to the Contractor by the MTC. Any subcontract in excess of $25,000, entered into as a result of this procurement, shall contain all the provisions stipulated in this Agreement to be applicable to subcontractors.

I. PROGRAM ACCESSIBILITY

The Contractor agrees to comply with all applicable requirements of the Americans with Disabilities Act of 1990 (ADA), 42 U.S.C. § 12101 et seq.; Section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794; Section 16 of the Federal Transit Act, as amended, 49 U.S.C. § 5310(f); and their implementing regulations. In particular, any web pages shall have text-based options that can be read by text-to-voice systems, and the telephone system shall have a TTY option available.

This project uses Section 255 of the Telecommunications Act of 1996 and Section 508 of the Rehabilitation Act of 1998 as a guideline for providing accessible services. It is the responsibility of Contractor to be familiar with these requirements and how they impact the delivery of 511 services. It is also the responsibility of Contractor to stay informed of any new acts/laws/regulations that govern accessibility so that the Project can remain compliant with any new acts/laws/regulations.

J. GRANT OF LICENSE TO PROPRIETARY WORK PRODUCTS AND OWNERSHIP OF WORK PRODUCTS

Contract requirements related to such licenses and to ownership of work products furnished under the Contract appear in *Appendix H, MTC 511 Traffic Contract Terms and Conditions*, Article 5.

1. 511 Software

511 Software is all software, regardless of its ownership, furnished by the Contractor to implement, operate, maintain or enhance the traveler information service. Except for MTC Software as defined below, ownership by MTC of 511 Software is not a requirement.

2. MTC Software

MTC Software is 511 Software developed by the Contractor or former 511 Traffic Contractors specifically for 511 and funded through this Contract or former 511 Traffic Contracts, not including software owned by the Contractor or a third party and customized for 511. MTC Software includes 511 Software in use in MTC's 511 system on the Effective Date of the Contract.

MTC shall own MTC Software. Contractor hereby assigns to MTC ownership of all right, title and interest in and to such MTC Software, including ownership of the entire copyright in such MTC Software, and agrees to execute all papers necessary for MTC to perfect its ownership. Ownership of MTC Software shall mean ownership of the entire copyright to the executable code and documentation (including training materials), compilable source code and source code documentation, and any modifications, revisions, upgrades or derivative works created during the term of this Contract for 511.

3. Grant of License to MTC Software

In the 511 Traffic Contract, MTC will grant to Contractor a royalty-free, non-transferable, non-exclusive license, solely in connection with the Project, to use, translate, reproduce, modify, adapt and create derivative works from, and to sublicense to its subcontractors MTC Software including source code and source documentation. Any other uses of MTC Software require the prior written approval of MTC. All translations, modifications, adaptations, derivative works or upgrades to MTC Software developed by Contractor under this grant of license shall be owned by and inure to the benefit of MTC. The source code for such translations, modification, adaptation, derivative works or upgrades shall be deposited in the escrow account, along with the accompanying documentation described therein, or furnished to MTC upon MTC's request, if Contractor does not establish such escrow account for any reason.

4. Grant of License to Restrictive Software

To the extent Contractor furnishes as 511 Software Restrictive Software owned by Contractor or one of its subcontractors, Contractor grants, and shall require any applicable Subcontractor also to grant, to MTC a royalty-free, non-exclusive license to use, translate, reproduce, modify, adapt and create derivative works from, and to license to third parties for such purposes, all such software, including its source code and source code documentation, for the benefit and operation

of the Project. Such license shall be effective upon 80% completion of the Work covering such software and payment of all amounts (less any retentions) due Contractor up to that date.

Pursuant to this grant of license, Contractor shall make available to MTC, upon such request, the source code and source code documentation for such software, along with a list of all applicable software development tools, i.e., all software required to edit/alter the source code and successfully recompile and operate the software, including operating systems, libraries, tools and utilities, data base structures and code and compilers.

As additional assurance of Contractor's compliance with these requirements, Contractor shall place the source code for all such Restrictive Software that has been placed under configuration management and control in a software escrow account, accompanied by detailed source code documentation, including a list of applicable software development tools, as described above. Such escrow account shall be created within thirty (30) days of integration of any Restrictive Software into the Project and updated with respect to all source code in the account within thirty (30) days of further integrations of Restrictive Software or updates that contain substantial revisions to the software then retained in escrow. The cost of maintaining such escrow shall be included in the Contract Price.

MTC agrees to maintain the confidentiality of all software, code and documentation licensed under this Article and to require any agents or third party contractors to whom MTC discloses such software to execute a non-disclosure agreement, the terms of which will be provided in advance to Contractor for review and comment.

APPENDIX A SCOPE OF WORK

Table of Contents

I. PROJECT MANAGEMENT

A. Project Planning

1. Develop and annually maintain a Five-Year Strategic Plan

   The initial plan shall be based on the Five-Year Work Plan presented in the selected proposal. The plan shall be updated annually using input from the annual strategy planning session (Task I.A.4), the summary of past year highlights (included in Task I.A.5), customer feedback (Task I.E.3) and other sources. The Five-Year Strategic Plan shall include:

   a. A five-year schedule for, and approach to, implementing project enhancements, new strategies, approaches and technologies showing the duration for performing work; the strategic plan shall summarize the analysis and assessment that led to the recommended schedule, including an analysis of 511 usage and user satisfaction trends,
   b. Approach and a five-year schedule to reduce project costs and/or make the project more cost-effective; the strategic plan shall summarize the analysis and assessment that led to the recommendations,
   c. Approach and a five-year schedule to add value to 511, such as partnerships, service exchanges, selling data, advertising, subscription services for end users, etc., including potential net revenue, impacts on users, revenue management, partnership management etc. The strategic plan shall summarize the analysis and assessment that led to the recommendations,
   d. Approach and a five-year schedule proposing optimal data collection strategies with respect to cost and quality compared to other sources available or becoming available. The strategic plan shall summarize the analysis and assessment that led to the recommended approach,
   e. An Equipment Replacement/System Lifecycle Plan and Schedule (See *Appendix B)*, and
   f. A five-year strategy for hosting 511 systems and for ensuring optimal system redundancy and physical security. The strategic plan shall summarize the analysis and assessment that led to the recommended approach,
   g. Analysis and assessment of strategies to improve privacy protections. The strategic plan shall summarize the analysis and assessment that led to the recommended approach, and
   h. Additional analysis and assessments as requested by MTC, including the strategies considered, issued analyzed, resulting recommendations and action plans.

2. Monitor and assess changing technology and industry trends to provide a “watch list” of new technology

   a. Stay informed of changing technology and industry trends related to any aspect of this project.
   b. Understand the capabilities of new technologies and their potential benefits to the project.
   c. Stay informed of MTC’s overall 511 project; MTC’s, SAFE’s and BATA’s other customer service projects; local Bay Area government agency projects; and other

Bay Area infrastructure development in as much as these things can impact this project.

d. Stay informed of the latest available San Francisco Bay Area Regional ITS architecture and standards.
e. Stay informed about the telecommunications environment, data ownership on state right of way, etc.

3. Provide ideas for, and maintain a list of, potential project optimizations and enhancements. Use customer feedback, website and phone statistics and reports, system reports, input from MTC, input from TIC staff, and Contractor experience to develop the list. Maintain the list through a web-based tool.

4. Lead an annual strategy planning session with MTC and/or the Change Control Board to:
   a. Review the draft five-year strategic plan and provide input for finalization,
   b. Review and discuss any completed analyses,
   c. Review and prioritize the list of potential project optimizations and enhancements, and
   d. Recommend specific strategies for graduation from the five-year strategic plan to the next Annual Work Plan.

5. Develop an Annual Work Plan

   Annually develop and deliver for MTC's approval "The 511 Traffic, Phone and Real-Time Transit Annual Work Plan." The Annual Work Plan may be updated during the course of the fiscal year upon request of MTC or Contractor, and after written approval of the MTC Project Manager. The Annual Work Plan shall include:
   a. A description of how the Contractor will implement each Scope of Work task in the coming year;
   b. Change requests for the coming year's optimizations that describe each optimization, intended outcomes, approximate hours to complete, schedule, assigned staff, risk factors, and potential impacts on the rest of the system;
   c. A descriptive list of the Task Orders, their deliverables and costs that shall be pursued in the coming year, including the system equipment and components that will be upgraded or replaced in the coming year, as informed by Task I.A.1;
   d. A spreadsheet showing task deliverables for the coming year and their due dates;
   e. A detailed Project Schedule (e.g., critical path, duration, phasing) showing how tasks will be developed and implemented during the remainder of the contract period and dependencies among tasks;
   f. Requests or suggestions for revising or modifying the project performance standards as appropriate;
   g. A summary of the past year highlighting (to the extent known at time of plan submittal) performance, objectives and outcomes, issues encountered, customer feedback trends, cost estimates vs. final costs, lessons learned, and suggestions for modifications to the program or the contract.

6. Develop a comprehensive Configuration Management Plan defining how the contractor will manage changes per the functional requirements in *Appendix A-2.*

Deliverables

Task/Subtask	Deliverable	Frequency
I.A.1	Five-year strategic plan	March 31, 2010 March 31, 2011 March 31, 2012 March 31, 2014
I.A.2	"Watch list" of new technology provided in a web-based format (e.g., ProjectSolve) that summarizes each technology, its capabilities, its pros and cons, applicability to the project, etc.	Begin list development 7/1/09 Update list as information about technology becomes available and no less frequently than quarterly.
I.A.3	Web-based list of potential project optimizations and enhancements (e.g., maintain list on ProjectSolve)	Begin list development 7/1/09 Update list as new ideas are generated and no less frequently than quarterly.
I.A.4	Annual strategy planning session	February 1, 2010 February 1, 2011 February 1, 2012 February 1, 2013 February 1, 2014
I.A.5	Annual Work Plan	Annually Final YR1: 7/31/09 Draft YR2: 3/31/10 Final YR2: 5/31/10 Draft YR3: 3/31/11 Final YR3: 5/31/11 Draft YR4: 3/31/12 Final YR4: 5/31/12 Draft YR5: 3/31/13 Final YR5: 5/31/13
I.A.6	Configuration Management Plan	Once, by 12/31/09 Update annually

B. Project Administration

1. Prepare and submit monthly invoices within 30 days of the end of the billable month. Invoices that include expenses related to enhancements should include:
   - Original budget,
   - Hours and dollars (by employee) billed for the current month,
   - Dollar amount invoiced to date,
   - Remaining budget,
   - Percentage of the work completed, and
   - Estimated cost to complete for budget items.

2. Submit monthly progress reports to MTC along with the monthly invoice. Each monthly progress report should be organized into sections per the Scope of Work Tasks and should include the following information:
   - A description of the significant activities that occurred during the month;
   - A log of issues that occurred during the month, including how they were resolved and/or resolution strategies;
   - Budget concerns, such as the possible need for reallocation, potential cost overruns or cash flow problems;
   - An updated project schedule (may be a link to updated schedule on ProjectSolve);
   - A discussion about issues and successes with schedule adherence and strategies for maintaining schedule adherence;
   - Annual Work Plan status report; ;
   - DBE utilization;
   - Monthly statistical reports;
   - Trend analysis and conclusions about phone and web usage;
   - Monthly performance standard calculations;
   - Customer comment reports;
   - Summary and analysis of customer comment trends and themes;
   - Log of Major and Total Failures as produced from the System Reliability Database;
   - Responses to MTC performance monitoring findings; and
   - Performance-based payment reduction calculations.
3. On a quarterly basis, provide a cost-to-complete analysis for all enhancement projects. that compares the estimated cost to complete each enhancement with the remaining enhancement budget and summarizes expected surpluses and deficits.
4. Provide administration from office space located in the nine-county Bay Area, preferably close to the MTC offices (e.g., within 10 miles) and readily accessible by transit, so that the trip takes no longer than thirty minutes from the MTC offices.
5. Conform to the 511 Privacy Policy (available at http://www.511.org/copyright_items/privacy.asp) when performing all contract activities. Conduct staff training to ensure that all Contractor staff are aware of and expected to support the 511 Privacy Policy.
6. Work with MTC to identify a privacy consultant to conduct a bi-annual privacy assessment that will be paid for through this contract.
7. Maintain auditable records of all project agreements, finances, etc.
8. Maintain a web-based document storage system (e.g., ProjectSolve). Store project documents, including all correspondence sent by the Contractor concerning the Project, in folders organized following the SOW task organization. Provide access to allow MTC staff to see and manage documentation as necessary.
9. Maintain all project documentation in the web-based document storage system (e.g., ProjectSolve). Define a naming system so that the most current version of a document can be easily identified. Update and/or provide additional system

documentation whenever system changes require and complete the update/addition within one month of change.

10. Track technical issues with the web-based bug-tracking software (e.g., Bugzilla). Provide access to allow MTC and Contractor staff to manage and understand issues, fixes, assignments, level of effort, next steps, etc.
11. Provide and maintain a tool to track the status of, and progress on, the Annual Work Plan during the course of the year per the functional requirements listed in *Appendix A-2*. Provide a monthly report per the functional requirements.
12. Provide and maintain a configuration management tool per the Configuration Management Plan (Task I.A.6) and the functional requirements listed in *Appendix A-2.* Provide a biennial report per the functional requirements.
13. Manage Equipment and Software Inventory
    a. Operate and maintain the Equipment and Software Inventory Database and produce a list of all equipment and software per the functional requirements provided in *Appendix A-2*. Maintain the list in the on-line project management files.
    b. Affix MTC property labels to all purchased equipment.
    c. Affix MTC bar-coded labels to all purchased equipment costing more than $5,000 and provide the equipment description and label number to MTC Project Manager.
    d. Maintain all equipment and software user manuals.
14. Following a thorough assessment and approval by MTC, implement strategies to add value to 511. Negotiate relationships with private sector partners and enter into business agreements and contracts with third parties. Enter into agreements with MTC to manage any revenue generated by the project.

Deliverables

Task/Subtask	Deliverable	Frequency
I.B.1	Monthly Invoices	Monthly within 30 days of the end of the billable month
I.B.2	Monthly Progress Reports	Monthly within 30 days of the end of the billable month
I.B.3	Cost to complete enhancements analysis	Quarterly
I.B.4	Local office space	By 9/30/09 and then maintained throughout the contract period.
I.B.5	Emails to the MTC Project Manager about staff privacy policy trainings: schedule, agenda, attendance, etc.	Whenever changes are made to the privacy policy and not less than annually
I.B.6	Bi-annual privacy assessment produced	3/31/11

	by a third party	3/31/13
I.B.7	Project records	Upon request
I.B.8	Updated, maintained ProjectSolve website	Ongoing
I.B.9	Updated project documentation	Within two months of any system change
I.B.10	Updated, maintained bug-tracking software	Ongoing
I.B.11	Annual Work Plan Status tool Annual Work Plan Status report	Tool set up by 9/30/09. Monthly (starting 10/31/09) – part of monthly progress report
I.B.12	Configuration management report	Finalize tool by June 30, 2010 and provide 2x per year with the monthly report.
I.B.13	Equipment/software list	By 9/30/09; Update every six months
I.B.14	Value-added services and/or revenue generated on behalf of the project	Based on approved value-added strategy (Task I.A.1)

C. Project Coordination

1. Coordinate team members to provide consistent staffing resources, maintain effective communications within the team, and ensure that changes to the project are well planned and coordinated.
2. Prepare for and lead bi-weekly project meetings with the MTC project staff; use the Annual Work Plan status tool (Task I.B.11) for managing discussion of action items, etc.
3. Support and participate on a Change Control Board comprised of members who shall consider the impacts of overall project strategy and direction on ongoing operations. The board will consider issues related to specific optimizations and enhancements. The board will meet annually to discuss and guide the Five-Year Strategic Plan.
4. Support MTC's on-going efforts to coordinate information sharing and project development with project partners, public transit operators, jurisdictions neighboring the San Francisco Bay Area, other 511 systems, other public agencies, researchers, visitors, other MTC contractors, and other interested parties. Such effort includes attending meetings, preparing information, etc. Coordinate with Caltrans' statewide traveler information initiatives.
5. Coordinate and lead tours of the TIC.
6. Provide input and feedback into marketing plans and activities.
7. Provide legislative activity support as needed, including:

a. Monitor issues related to this project, such as the telecommunications environment, data ownership on state right of way, etc.,
b. Coordinate with MTC legislative representatives in Sacramento and Washington, D.C,
c. Develop petitions, commenting on draft rule-makings or draft legislation,
d. Coordinate filings,
e. Meet with decision-makers, and
f. Collaborate with other stakeholders

8. Be responsible for all contractual, technical, legal, and administrative aspects associated with maintaining the FCC designation for 511 in the nine-county S.F. Bay area, domain name maintenance and trademark applications.

9. Help manage inter-operability between the Bay Area's 511 system and adjoining regions.

Deliverables

Task/Subtask	Deliverable	Frequency
I.C.1	Effective project team	On-going
I.C.2	MTC – Contractor meetings	Bi-weekly
I.C.3	Change Control Board meeting participation and minutes	Annual strategy meetings Additional meetings as needed
I.C.4	Documents to support MTC's information sharing efforts	As requested by MTC
I.C.5	TIC Tours	As requested by MTC - Up to ten per year
I.C.6	Marketing support	Approximately once per year
I.C.7	Materials needed for legislative activity support	Infrequently – less than once per year
I.C.8	Materials needed for contractual, technical, legal, and administrative management related to maintaining the FCC designation for 511	Infrequently – less than once per year
I.C.9	Summaries of actions and decisions related to 511 interoperability across regions	Infrequently – approximately once per year

D. Performance Monitoring

1. Maintain and operate phone and web usage tracking process(es) and online tool(s) to track usage of the 511 phone system and traffic.511.org, 511.org, my511.org, and the departure times page on transit.511.org. These processes and tools currently include a backend phone tool, SQL Web Reports and WebTrends.
2. Maintain and generate a standard set of reports and/or reporting functions documenting usage of the 511 phone service, traffic.511.org, MY 511 and Real-Time Transit as well as customer interaction with e-mail, text-based, and other mobile device communications (e.g., alerts, e-blasts, desktop widgets) according to the functional requirements provided in *Appendix A-2, Functional Requirements*. A screenshot of the website statistic-generation dashboard is available at http://www.mtc.ca.gov/jobs/. Sample reports are available at http://www.mtc.ca.gov/jobs/.
3. Analyze the monthly usage statistics on a monthly basis to assess trends, spikes, unusual occurrences, etc. Run additional statistical reports to support such analysis as needed or as requested by MTC to assess consumer trends and preferences. Use analysis to inform capacity, scalability and redundancy strategies. Annually summarize statistical data from the preceding year to provide an overall usage trend, a comparison to prior-year statistics, and a discussion of implications for ongoing operations, maintenance, optimizations, enhancements and five-year strategy.
4. Maintain the "Reporting Requirements Document" in the web-based document repository, documenting the different reports that can be, or are, generated including a summary of the report content, its purpose, whether it is produced on a regular basis, how frequently it is produced, and its primary audience.
5. Provide reports following the aftermath of "events" -- circumstances that cause out-of-the-ordinary 511 usage. An event could be a usage spike due to weather, a planned transportation system disruption, or an emergency.
6. Maintain the System Reliability Database per the functional requirements provided in *Appendix A-2, Functional Requirements*. (TIC Staff are responsible for entering data into the database according to the TIC SOP.) Maintain ability to run System Availability Reports from the database and produce the Log of Major and Total Failures.
7. Provide data and/or statistics to facilitate monthly performance monitoring conducted by MTC and/or MTC's performance monitoring contractor.
8. Calculate the three monthly performance standards.
9. Review and respond to findings from MTC's performance monitoring process. Propose improvements and changes as appropriate.
10. Independent of, and in addition to, MTC or third-party performance monitoring, monitor system performance as a tool to support continuous project improvement.

Deliverables

Task/Subtask	Deliverable	Frequency
I.D.1 & 2	A standard set of comprehensive 511 Data Dissemination Statistics reports per the functional requirements.	Weekly and Monthly; provided with the monthly progress report; or on-demand for different time intervals
I.D.3	Monthly Trend Analysis and Conclusions about phone usage and traffic.511.org Annual Trend Analysis and Conclusions about phone usage and traffic.511.org	Monthly – part of monthly progress report Annually; due by July 31st each year
I.D.4	Reporting requirements document	Update as needed
I.D.5	Event reports	Following events
I.D.6	Log of Major and Total Failures	Monthly – part of monthly progress report
I.D.7	Statistics and data to facilitate MTC or third-party performance monitoring	Monthly – part of monthly progress report
I.D.8	Monthly performance standard calculations	Monthly – part of monthly progress report
I.D.9	Response to MTC performance monitoring findings	Monthly - – part of monthly progress report
I.D.10	Contractor determined performance monitoring results	Monthly, beginning 12/31/09

E. Customer Comment Management

1. Manage and respond to customer comments received through both the phone and web pertaining to traffic, MY 511, and real-time transit services. Review user comments sent to the website and phone on each weekday, and respond to, close, or assign them for further action within a day of receipt.
2. Maintain a log (e.g., a spreadsheet) on ProjectSolve documenting customer comments received via the 511 phone service, traffic.511.org, my511.org, traffic-specific comments received via 511.org, and real-time transit comments received via 511.org or transit.511.org per the functional requirements provided in *Appendix A-2*.
3. Analyze customer comments to understand how the system can be improved. Use this analysis in strategic planning (Task I.A.1) to recommend system changes to MTC.

Deliverables

Task/Subtask	Deliverable	Frequency
I.E.1-2	Customer Comment Reports	Monthly – included in monthly progress report
I.E.3	Customer Comment Analysis	Monthly – included in monthly progress report

F. Program Transitions (Subtasks 1 – 2 apply only if a new contractor team is selected)

1. Finalize the transition plan provided in the selected proposal and work with the existing project Contractor(s) for up to six months to transition project responsibilities at the start of the contract period and facilitate all necessary technical and procedural training. Transition may be shortened on approval by MTC, if MTC determines it can be conducted acceptably within a shorter time period.
2. Start independent operation of the 511 Traffic Contract no later than January 1, 2010.
3. Train others designated by MTC to transition any task(s) identified as a renewable service if MTC exercises its option to not renew the task.
4. Prepare all documents requested by MTC needed to support the preparation of the next Request for Proposal for a new 511 Traffic Contractor.
5. Prepare a project transition plan six months before the end of the contract period detailing steps to successfully transition project responsibilities.
6. Work with future project contractor(s) for at least four (4) months and not longer than six (6) months to transition project responsibilities at the end of the contract period, including providing all necessary technical and procedural training.

Deliverables

Task/Subtask	Deliverable	Frequency
I.F.1	Finalized transition plan	July 1, 2009
I.F.2	Successful demonstration of task transition	No later than January 1, 2010
I.F.3	Training sessions, documentation, training materials	Up to four times over five years, in the event that a renewable task is not renewed
I.F.4	Documents necessary to develop next procurement	Once; As early as January 2012
I.F.5	Project Transition Plan for the next procurement	Once; As early as January 2012
I.F.6	Successful transition to the next contractor	Once; As early as July 2012 for 4 – 6 months

II. DATA COLLECTION AND PROCESSING

A. Operate and Maintain the Traffic Data Collection and Processing System

1. Operate and maintain the 511 traffic data collection system components in place at the time of the contract start date (listed in *Appendix A-3, System Components to Operate & Maintain*) until they are replaced with new components and/or a new system as approved in Five-Year Strategic Plan; operate and maintain new components thereafter. Operate and maintain the system to meet the performance standards described in *Appendix A-1, Key Performance Indicators and Associated Payment Deductions* and the functional requirements described in *Appendix A-2, Functional Requirements*.
2. Implement a program of routine, preventive maintenance; troubleshoot and fix system failures; repair equipment; respond to and recover from hardware and software outages; maintain software provider agreements; provide a secure, stable server environment; backup the system data; and archive the backup media to ensure the system is performing optimally and to meet the performance standards described in *Appendix A-1, Key Performance Indicators and Associated Payment Deductions* and the functional requirements described in *Appendix A-2, Functional Requirements.*
3. Maintain and/or enter into agreements with third-party traffic data providers for the purchase of traffic data. Work with third-party providers to ensure data meet the performance standards described in *Appendix A-1, Key Performance Indicators and Associated Payment Deductions* and the functional requirements described in *Appendix A-2, Functional Requirements.*
4. Manage data collection from Caltrans loop detectors and other traffic data collection sensors. Work with Caltrans to ensure the data meet the performance standards described in *Appendix A-1, Key Performance Indicators and Associated Payment Deductions* and the functional requirements described in *Appendix A-2, Functional Requirements*.
5. Process data to provide 511 traffic features (e.g., the 511 traffic map, traffic conditions, 511 driving times, MY 511, Predict-a-Trip).
6. Proactively manage system capacity and redundancy issues (e.g., system availability, peaking problems, loading problems) to accommodate operational needs and to be prepared for an emergency. Monitor capacity needs and make recommendations if existing capacity is insufficient.
7. Perform routine and preventive maintenance work on data collection devices (antennae/readers, modems, power supply) in Caltrans' Right of Way in accordance with the terms of Caltrans' encroachment permit(s). Obtain and maintain valid encroachment permit(s).
8. Maintain, and update as needed, a database and map of field sites where MTC data collection equipment has been deployed.
9. Review the administrator's daily reports, the data collection project utilities on http://lan.511.org/Otherstuff.html, customer comments and monthly performance monitoring reports to identify roadway sections with non-functional or inadequate

data sources. Identify data collection solutions for links with inadequate data sources and slate the solutions as optimizations or enhancements as appropriate.

10. Maintain an adequate supply of spare reader parts and modems and repair non-functional readers and modems per the functional requirements.
11. Maintain an on-line or disk archive of historical traffic data.
12. Optimize data collection and improve data accuracy per *Appendix A-5, Optimizations*. Specific optimization tasks for each contract year shall be identified on an on-going basis through Task I.A.3 (Optimizations List) and defined annually through Task I.A.5 (Annual Work Plan).

Deliverables

Task/Subtask	Deliverable	Frequency
II.A.1 - 2	Traffic data collection system components and data outputs that meet functional requirements and performance standards	Continuously
II.A.3	Third-party agreements and data outputs that meet functional requirements and performance standards	As needed; Continuously
II.A.2	Data outputs that meet functional requirements and performance standards	Continuously
II.A.5	511 features that meet their functional requirements	Continuously
II.A.6	Recommendations for increasing or improving system capacity	Provide as needed in monthly reports; Include in Strategic Plan and Annual Plan
II.A.7	Valid encroachment permit(s).	Ongoing
II.A.8	Updated and maintained inventory database and map of MTC data collection field sites	As changes occur or biannually
II.A.9	Identification of data collection trouble-spots and remedies	Include in monthly report, Strategic Plan and Annual Plan
II.A.10	Receipt of equipment delivery Spare part inventory	Upon receipt July 1 each year starting 2010
II.A.11	Archive of historical traffic data	Ongoing
II.A.12	Optimization change requests	Annually as part of the Annual Work Plan (Task I.A.5)

B. Operate and Maintain the Real-Time Transit Data Collection & Processing System (Renewable Service)

1. Operate and maintain all real-time transit system components in place at the time of the contract start date (listed in *Appendix A-3, System Components to Operate & Maintain*) until they are replaced with new components and/or a new system as approved in Five-Year Strategic Plan; operate and maintain new components thereafter. Operate and maintain the system to meet the performance standards described in *Appendix A-1, Key Performance Indicators and Associated Payment Deductions* and the functional requirements described in *Appendix A-2, Functional Requirements*.
2. Implement a program of routine, preventive maintenance; fix system failures; repair equipment; respond to and recover from hardware and software outages; maintain software provider agreements; provide a secure, stable server environment; backup the system data; archive the backup media; and maintain server equipment in a secure, stable environment. The preventive maintenance program shall ensure that the real-time transit system data collection and data processing components are performing optimally and collecting real-time transit predication and configuration data from transit agencies that have developed or will develop real-time transit feeds (up to 11 bus/rail and ferry agencies). The program must meet the functional requirements described in *Appendix A-2, Functional Requirements*.
3. Work with transit agencies, their vendors and MTC's 511 Transit Contractor to collect transit configuration data via the RTD Data Extraction Tool into the Regional Real-Time Transit system and to ensure changes to configuration data are identified, verified, and updated in the real-time transit system per the functional requirements listed in *Appendix A-2, Functional Requirements.*
4. Process data to provide 511 real-time transit features (e.g., 511 Transit Departures).
5. Proactively manage system capacity and redundancy issues (e.g., system availability, peaking problems, loading problems) to accommodate operational needs and to be prepared for an emergency. Monitor capacity needs and make recommendations if existing capacity is insufficient.
6. Maintain and implement a Quality Assurance/Quality Control (QA/QC) Strategy for the static configuration and real-time transit prediction data to ensure the data is up-to-date and accurate. As new configuration data is uploaded to the system and compared to existing configuration data, manually check the exception report and revise data as required by the system to meet the QA/QC and accuracy requirements.
7. Run system logs, interpret system logs, and provide ideas for improving the performance monitoring plan to support third-party or MTC-led performance monitoring that will:
    a. Test data consistency between the regional real-time transit system and 511, transit.511.org, MY 511 and the network of regional real-time signs at transit hubs.

b. Test that data transfer times from the transit agencies' into the real-time system and out to through the real-time dissemination features are meeting the functional requirements.
c. Test the data accuracy of the regional system's real-time transit predictions from the perspective of phone, web, and hub sign users.

8. Comply with the Regional Real-Time Transit System Roles and Responsibilities available at http://www.mtc.ca.gov/jobs/.
9. Maintain an on-line or disk archive of historical real-time transit data per the Regional Real-time Transit System Requirements.
10. Attend, participate in, and prepare appropriate materials for monthly Real-Time Transit Technical Advisory Committee (TAC) meetings as directed by MTC.
11. Conduct the JMS acceptance test planning.
12. Optimize real-time transit data collection and improve data accuracy per Appendix A-5, Optimizations. Specific optimization tasks for each contract year shall be identified on an on-going basis through Task I.A.3 (Optimizations List) and defined annually through Task I.A.5 (Annual Work Plan).

Deliverables

Task/Subtask	Deliverable	Frequency
II.B.1 - 2	A real-time transit data collection system maintained to meet functional requirements and performance standards	Ongoing
II.B.3	A configuration data set that meets functional requirements	Ongoing
II.B.4	511 features that meet their functional requirements	Continuously
II.B.5	Recommendations for increasing or improving system capacity	Provide in monthly reports as needed and in Strategic Plan and Annual Plan
II.B.6	QA/QC Strategy results reports	Monthly
II.B.7	System logs and interpretation needed to support performance monitoring	No less than quarterly and no more than monthly
II.B.8	A real-time system that complies with the Regional Real-Time Transit Data Sharing and Storage Policy	Ongoing
II.B.9	On-line or disk archive of historical real-time transit data	Ongoing
II.B.10	Materials for Technical Advisory Committee (TAC) meetings	Monthly
II.B.11	JMS Acceptance Test Plan	TBD
II.B.12	Optimization change requests	Annually as part of the Annual Work Plan (Task I.A.5)

III. DATA DISSEMINATION

A. Operate and Maintain 511 Web Services (Renewable Service)

1. Operate and maintain all website system components and software provider agreements in place at the time of the contract start date (listed in *Appendix A-3, System Components to Operate & Maintain*) until they are replaced with new components and/or a new system as approved in Five-Year Strategic Plan; operate and maintain new components thereafter. Operate and maintain the system to meet the performance standards described in *Appendix A-1, Key Performance Indicators and Associated Payment Deductions* and the functional requirements described in *Appendix A-2, Functional Requirements.*
2. Implement a program of routine, preventive maintenance; troubleshoot and fix traffic page, 511.org, my511.org, and the real-time transit page system failures; repair equipment; respond to and recover from hardware and software outages; maintain software provider agreements; provide a secure, stable server environment; backup the system data; and archive the backup media to ensure that the system components of the web pages are performing optimally and to meet the performance standards described in *Appendix A-1, Key Performance Indicators and Associated Payment Deductions* and the functional requirements described in *Appendix A-2, Functional Requirements*.
3. Monitor the traffic pages, MY 511 pages and any pages related to real-time transit to detect dead links and graphics; find wrong links, typographical errors, or pages without content; report issues to appropriate people. Fix issues or develop action plans for resolving issues.
4. Host – or manage the hosting - of traffic.511.org, my511.org, the real-time transit page, and 511.org per the functional requirements described in *Appendix A-2, Functional Requirements*.
5. Operate and maintain the following data dissemination features to meet the performance standards described in *Appendix A-1, Key Performance Indicators and Associated Payment Deductions* and the functional requirements described in *Appendix A-2, Functional Requirements.*
    a. Traffic.511.org
    b. The 511 traffic map,
    c. 511driving times℠,
    d. MY 511℠ (my511.org),
    e. Predict-a-Trip℠ (typical/average driving times),
    f. Ticker,
    g. Customer comment features (i.e., on-line survey tool),
    h. 511 Departure Times℠ (This feature resides on the MY 511 servers but is framed by the transit.511.org site to ensure a consistent look and feel to all 511 transit web features.)
    i. Emergency response features
    j. New features and functions as they are added

6. Maintain, and update as needed, a standard electronic map database and licenses for the map databases to meet the functional requirements defined in *Appendix A-2, Functional Requirements*. Coordinate mapping issues with the MTC GIS Group as needed.
7. Automatically forward customer comments provided through traffic.511.org, 511.org or my511.org; or made about real-time transit website features, to a predetermined email list of MTC staff.
8. Support a "511 Lab" tool and potentially also website (to be developed in FY 08/09) that encourages third-party development of applications using 511 data. Facilitate the integration of externally developed applications (e.g., applications developed by users of the API) into traffic.511.org, my511.org and pages associated with real-time transit as directed by MTC.
9. Provide general web design services and recommend design changes to improve the functionality of traffic.511.org, my511.org and pages related to real-time transit following the design lead of the marketing contractor. Coordinate with other 511 sister pages (i.e. transit, rideshare, bicycling) to enable functional and design consistency of the 511 pages.
10. Update traffic.511.org, my511.org and pages related to real-time transit as the 511 style sheet changes.
11. As new transit agencies are added and updates to existing agencies' configuration data are made to the Regional Real-time Transit system, add all appropriate data (configuration and predictions) to MY 511, the 511 Departure Times web feature, the Stop ID look-up web page.
12. Proactively manage system capacity and redundancy issues (e.g., system availability, peaking problems, loading problems) to accommodate operational needs and to be prepared for an emergency. Monitor capacity needs and make recommendations if existing capacity is insufficient.
13. Optimize web page data dissemination through on-going maintenance per *Appendix A-5, Optimizations*. Specific optimization tasks for each contract year shall be identified on an on-going basis through Task I.A.3 (Optimizations List) and defined annually through Task I.A.5 (Annual Work Plan).

Deliverables

Task/Subtask	Deliverable	Frequency
III.A.1 - 4	A 511 traffic website maintained to meet functional requirements and performance standards	Ongoing
III.A.5	511 traffic and real-time transit website features and functions maintained to meet functional requirements and performance standards	Ongoing
III.A.6	A 511 traffic map database that is	As needed

	maintained to meet the functional requirements	
III.A.7	Customer comments delivered to appropriate MTC staff	Ongoing
III.A.8	Report of external groups accessing 511 data	Monthly
III.A.9	Website design changes; Website design updates per new style sheets; Website design recommendations	As needed
III.A.10	Updated website	As needed
III.A.11	Real-Time Transit departure data appearing on MY 511, the web Departure Times feature and the Stop ID look-up page per the functional requirements	Ongoing
III.A.12	Recommendations for increasing or improving system capacity	Provide as needed in monthly reports; Include in Strategic Plan and Annual Plan
III.A.13	Optimization change requests	Annually as part of the Annual Work Plan (Task I.A.5)

B. Operate and Maintain the 511 Phone System (Renewable Service)

1. Operate and maintain all phone system components and software provider agreements in place at the time of the contract start date (listed in *Appendix A-3, System Components to Operate & Maintain*) until they are replaced with new components and/or a new system as approved in Five-Year Strategic Plan; operate and maintain new components thereafter. Operate and maintain the system to meet the performance standards described in *Appendix A-1, Key Performance Indicators and Associated Payment Deductions* and the functional requirements described in *Appendix A-2, Functional Requirements.*

2. Implement a program of routine, preventive maintenance; troubleshoot and fix system errors (e.g. bad transfers, out-of-date recordings and failures; repair equipment; respond to and recover from hardware and software outages; maintain software provider agreements; provide a secure, stable server environment; backup the system data; and archive the backup media to meet the performance standards described in *Appendix A-1, Key Performance Indicators and Associated Payment Deductions* and the functional requirements described in *Appendix A-2, Functional Requirements.*

3. Provide the 511 telephone service through a number free of charge to callers from landlines and pay telephones anywhere in the nine-county Bay Area and ensure that 511 services are available to all mobile phone users, regardless of carrier. Negotiate with pay phone companies as needed. Proactively monitor communication link quality and diagnose issues as necessary.

4. Disseminate the following information and maintain the following data dissemination features further described in *Appendix A-2*, *Functional Requirements.*
    a. Traffic Conditions
    b. 511 Driving Times SM,
    c. Free transfers to other transportation information (e.g. FasTrak, TransLink, Regional Rideshare Program, transit agencies, etc.),
    d. MY 511SM (both traffic and real-time transit data)
    e. Phone floodgates,
    f. Real-time transit (511 Departure Times),
    g. Emergency menus,
    h. Back-up touch tone system,
    i. Survey capability,
    j. Usage reporting,
    k. Comment feature, and
    l. New features and functions as they are added
5. Research usage of all phone menu options and static information and recommend how to change, streamline, reduce, re-organize, or maintain the current menu options to improve system usability. Analyze communications links, diagnose communications quality issues and recommend system improvements. Analyze phone system stability and capability and recommend system improvements. Program the recommendations as either optimizations or enhancements.
6. Update and change the 511 phone menu structure and static information by preparing for, managing and conducting recording sessions to update the 511 phone's .wav files not less than quarterly. Install and test new recorded .wav files in the 511 phone system. Maintain a directory tree of all current system .wav file scripts and names and a searchable database of total .wav files recorded. Provide defined sets of randomly recorded customer call .wav files annually for analysis by MTC, including both successful utterances and those that have resulted in rejection/sorry responses.
7. Conduct annual voice-response tuning sessions and make adjustments based on findings in a timely manner.
8. Coordinate with other MTC 511 contractors (i.e., transit, rideshare, bicycling) the MTC Marketing Contractor, and other MTC operations programs (i.e. FasTrak, TransLink, Freeway Aid) to gather information and develop and implement changes to the phone system (e.g., create recordings, implement menu changes.)
9. Maintain access to the 511 phone system for people with disabilities (i.e., meet ADA-compliance guidelines and policies). Maintain and test the touch-tone back-up system and the 711 relay service connection to 511 monthly.
10. As new transit agencies are added and updates to existing agencies' configuration data are made to the Regional Real-time Transit system, update the phone Departure Times and MY 511 features with new recorded wav files and recognitions of routes, directions, stop IDs, and stop names. Also, ensure that all additions and changes flow through the entire user interface, including touchtone options. Ensure that all

predictions play back as stipulated in the Real-time Transit User Interface Requirements.

11. Proactively manage system capacity and redundancy issues (e.g., system availability, peaking problems, loading problems) to accommodate operational needs and to be prepared for an emergency. Monitor capacity needs and make recommendations if existing capacity is insufficient.

12. Optimize the phone system and improve the customer experience per *Appendix A-5, Optimizations*. Specific optimization tasks for each contract year shall be identified on an on-going basis through Task I.A.3 (Optimizations List) and defined annually through Task I.A.5 (Annual Work Plan).

Deliverables

Task/Subtask	Deliverable	Frequency
III.B.1 - 2	A 511 phone system maintained to meet the functional requirements and performance standards	Ongoing
III.B.3	A 511 phone system free to landline (including payphone) callers throughout the Bay Area and available to all mobile phone users	Ongoing
III.B.4	511 data dissemination features that meet the functional requirements	Ongoing
III.B.5	Phone system recommendations report	As proposed by June 30, 2010
III.B.6	Directory and database of recordings	Update as needed and not less than quarterly
III.B.7	Voice recognition adjustments	Annually
III.B.8	Phone system recordings	Approximately quarterly
III.B.9	Reports documenting results of touchtone back-up system and 711 relay service connection	Monthly
III.B.10	Add and maintain the Departure Times phone user interface as transit agencies are added to the Regional Real-time Transit system or make changes to their data in system.	Ongoing
III.B.11	Recommendations for increasing or improving system capacity	Provide as needed in monthly reports; Include in Strategic Plan and Annual Plan
III.B.12	Optimization change requests	Annually as part of the Annual Work Plan (Task I.A.5)

C. Provide Traffic Data Feeds

1. Maintain and provide the Caltrans Reverse Data feed to Caltrans via the existing interface.
2. Actively promote the 511 traffic data feed (TOMS - TravInfo Open Messaging Service -, or its functional equivalent) to 511 Information Service Providers (ISPs). Maintain the current ISP agreement and execute it with ISPs when requested. Maintain a list of traffic data feed recipients. Collect and track ISP usage data in a revised reporting format approved by MTC. (A sample of the current report is available at http://www.mtc.ca.gov/jobs/.)
3. Maintain the Application Programming Interface (API) to allow external parties to create specialty applications using 511 data and make all processed and original 511 traffic data that is not restricted by privacy constraints or data purchase contracts available to external parties for the purpose of developing 511 specialty applications. Develop and maintain agreements allowing access to the API to interested third parties and execute agreements for this purpose when requested by MTC.
4. Provide link and trip travel time data for special requests from MTC via email.
5. Optimize traffic data feeds per *Appendix A-5, Optimizations*. Specific optimization for each contract year shall be identified on an on-going basis through Task I.A.3 (Optimizations List) and defined annually through Task I.A.5 (Annual Work Plan).

Deliverables

Task/Subtask	Deliverable	Frequency
III.C.1	Delivery of Caltrans Reverse Data feed to Caltrans	Continuously and ongoing
III.C.2	511 Traffic data feed (TOMS or its functional equivalent) ISP Agreement ISP usage report	Continuously and ongoing Execute as requested by third parties Provide revised template by 8/31/09 Include in the monthly progress report (Task I.B.2) no longer than one month in arrears.
III.C.3	511 Traffic data available to the public for development purposes. API data feed agreement	Continuously and ongoing Develop template by 9/30/09; Execute as requested by third parties
III.C.4	Link and/or trip travel time data	Within 7 days of request
III.C.5	Optimization change requests	Annually as part of the Annual Work Plan (Task I.A.5)

D. Real-Time Transit Data Feed and Hub Signs (Renewable Service)

1. Per the functional requirements described in *Appendix A-2*, provide a data feed to disseminate all real-time transit prediction data from the Regional Real-time Transit system to 511 phone, 511 web, to interested public transit agencies, to the regional transit hub displays, and others as directed by MTC.
2. As new transit agencies are added and updates to existing agencies' configuration data are made to the Regional Real-time Transit system, add all appropriate data (configuration and predictions) to the Departure Times hub sign web pages.
3. Build and maintain Departure Times hub sign web pages and maintain the real-time transit hub signage software to provide departure predictions for display on large monitors at the transit hubs. Work with the hub owner transit agencies on display content and appearance and to troubleshoot and resolve display issues.
4. Optimize real-time transit data dissemination per *Appendix A-5, Optimizations*. Specific optimization tasks for each contract year shall be identified on an on-going basis through Task I.A.3 (Optimizations List) and defined annually through Task I.A.5 (Annual Work Plan).

Deliverables

Task/Subtask	Deliverable	Frequency
III.D.1	Real-time transit data feed	Continuously and ongoing
III.D.2	Dissemination of departure times for additional transit agencies	Per the real-time transit roll-out schedule
III.D.3	Information provided to transit hub signs that meets functional requirements	Continuously and ongoing
III.D.4	Optimization change requests	Annually as part of the Annual Work Plan (Task I.A.5)

E. Text Message and Email Data Dissemination (Renewable Service)

1. Per the functional requirements described in *Appendix A-2*, provide alerts, announcements, and other messages to registered MY 511 users via e-mail and SMS (i.e., text messaging).
2. Provide the existing MY 511 alerts, which include:
    a. Traffic severity alerts (sent when conditions change based on a user-specified percentage over typical historical conditions)
    b. Traffic status updates (sent at a user-specified time and day)
    c. Transit status updates (sent at a user-specified time and day)
3. Maintain a user registration and account management process (through MY 511) to modify message preferences and/or subscriptions.

4. As new features are added to 511 and MY 511, develop and disseminate other SMS and e-mail messages, as appropriate.
5. Monitor message distribution for bounces and spam-filter issues; make corrections to system to ensure proper delivery of messages.
6. Optimize text message and email data dissemination per *Appendix A-5, Optimizations*. Specific optimization tasks for each contract year shall be identified on an on-going basis through Task I.A.3 (Optimizations List) and defined annually through Task I.A.5 (Annual Work Plan).

Deliverables

Task/Subtask	Deliverable	Frequency
III.E.1 - 2	Alerts, announcements and e-mail messages disseminated to 511 users per the functional requirements	Continuously and ongoing
III.E.3	List of registered users and unsubscribed users	Monthly
III.E.4	Additional types of SMS and email messages	As needed
III.E.5	Message error log, issue list and resolution plans	Include with monthly progress report
III.E.6	Optimization change requests	Annually as part of the Annual Work Plan (Task I.A.5)

IV. THE 511 TRAVELER INFORMATION CENTER (TIC)

A. Operate the TIC

1. Operate and staff the Traveler Information Center (TIC) 24 hours a day, 365 days per year in accordance with the *TIC Standard Operating Procedures (SOP)*, the *TIC Supervisor Standard Operating Procedures (SOP)*, the *TIC System Administrator Standard Operating Procedures (SOP)*, the *TIC Operations Manual*, and the *TIC Emergency Operating Procedures* provided at http://www.mtc.ca.gov/jobs/ (or their updates) and the functional requirements described in *Appendix A-2, Functional Requirements*.
2. Coordinate TIC Operations with Caltrans District 4 Transportation Management Center staff and California Highway Patrol staff. Convene meetings with Caltrans and CHP staff as needed (likely quarterly) to review responses to traffic incidents and share suggestions for improved future response.
3. Train all new and current TIC staff and non-TIC staff, as appropriate, on the TIC SOPs and the 511 Operations Manual whenever changes are made to these documents or at least every six months. Train all TIC staff on 511 privacy policies and on procedures to ensure protection of sensitive data and compliance with MTC policies.
4. Conduct a mandatory training course of all Contractor staff at least annually on the Emergency Operating Procedures.

Deliverables

Task/Subtask	Deliverable	Frequency
IV.A.1	Staffed and functioning TIC in accordance with SOP documents; deliverables prescribed by the various SOP documents	Continuously 24/7
IV.A.2	Meetings with Caltrans and CHP staff	Four to six per year
IV.A.3	Emails to the MTC Project Manager about TIC staff trainings: schedule, agenda, attendance, etc.	Upon new hire, or at least every six months or whenever changes are made to the TIC SOPs or O & M Manual or whenever staff changes occur (whichever is shorter). Conduct first training by 9/30/09

B. Document TIC Procedures

1. Review and update the existing TIC Standard Operating Procedures (SOPs) (See the package of SOPs related to the TIC provided at http://www.mtc.ca.gov/jobs/) whenever system changes affect TIC Operations, and not less than annually.

2. Update the *511 Operations Manual* provided at http://www.mtc.ca.gov/jobs/ whenever system changes affect TIC Operations, and not less than annually. This manual provides "how-to" instructions for operating the different TIC applications and systems.
3. Update and maintain *TIC Emergency Operating Procedures (EOP)*.

Deliverables

Task/Subtask	Deliverable	Frequency
IV.B.1	TIC SOPs	Update as needed and not less than annually
IV.B.2	511 Operations Manual	Update as needed and not less than annually
IV.B.3	TIC EOP	Update as needed and not less than annually

C. Manage the TIC Location

1. Per MTC's Cooperative Agreement with Caltrans, maintain the current TIC at Caltrans District 4 headquarters, 111 Grand Avenue, Oakland, CA. Work with Caltrans during the seismic retrofit of their building to temporarily reconfigure the TIC.
2. Operate and maintain the office assets (furniture, computers, etc.) in place at the time of the contract start date (listed in *Appendix A-3, System Components to Operate & Maintain)* until they are replaced. Replace equipment as directed by the Annual Work Plans (Task I.A.5).
3. Proactively manage system capacity and redundancy issues (e.g., system availability, peaking problems, loading problems) to accommodate operational needs and to be prepared for an emergency. Monitor capacity needs and make recommendations if existing capacity is insufficient.

Deliverables

Task/Subtask	Deliverable	Frequency
IV.C.1	Staffed and functioning TIC located at Caltrans District 4 headquarters	Continuously 24/7
IV.C.2	TIC equipment inventory	Continuously 24/7
IV.C.3	Recommendations for increasing or improving system capacity	Provide as needed in monthly reports; Include in Strategic Plan and Annual Plan

V. EMERGENCY RESPONSE

A. Respond to Emergencies

1. Assist MTC with minimal notice and provide emergency response resources per the functional requirements defined in *Appendix A-2, Functional Requirements*.
2. Develop and maintain an hourly emergency staffing plan with assigned personnel and responsibilities.
3. Follow the procedures of the TIC Emergency Operating Plan (EOP).
4. Continually collect and disseminate disaster related information available from regional emergency management centers, Caltrans, CHP, MTC, transit agencies and 511's regular sources during emergencies.
5. Implement emergency response tools (e.g., The Emergency Abbreviated System (EAS) for the web and/or Phone) and procedures within twenty (20) minutes of being instructed by MTC to do so.
6. Maintain the system during an emergency and monitor system performance.
7. Attend meetings and coordinate with public agencies and other 511 contractors.
8. Provide system usage reports to public agencies during and at the end of the incident.
9. Immediately upon undertaking the emergency response effort, track and maintain records of all hours worked and costs associated with the response effort.

Deliverables

Task/Subtask	Deliverable	Frequency
V.A.1	Required staffing resources	When an emergency occurs
V.A.2	Emergency staffing plans	Throughout the course of an emergency
V.A.3 - 5	Emergency related information disseminated through 511	Throughout the course of an emergency
V.A.6	Operational system	Throughout the course of an emergency
V.A.7	Meetings	Throughout the course of an emergency
V.A.8	Emergency usage reports	During and following an emergency
V.A.9	Records of hours worked by personnel and associated costs, and all other costs associated with emergency response	During and following an emergency

VI. ENHANCEMENTS

Enhancements are significant improvements to features, functions, data sources, or the system's underlying technologies. Generally speaking, and to distinguish them from optimizations, they require significant Contractor effort (e.g., more than 40 person hours of development time) due to a degree of complexity or risks likely to be encountered during development.

Enhancements will be implemented following the execution of Task Orders. Each Task Order will specify the scope, schedule, budget and payment provisions for work to be performed (e.g., time and materials or deliverables). Once MTC and the Contractor agree to the terms of a Task Order, it will be executed by both parties and work will begin.

Appendix A-6, Enhancements, lists potential enhancements that could be undertaken during the course of the contract period.

Either MTC or the Contractor through the Strategic Planning and Annual Work Plan tasks, I.A.1 and I.A.5, may recommend enhancements respectively. The implementation of enhancements will also depend on available budget, as the budget identified for this contract does not include full funding for all Project Element VI enhancements listed in *Appendix A-6*. MTC will work with the Contractor to prioritize and approve the most important and cost-effective tasks based upon the Contractor's analysis performed in Task I.A.1. In certain cases, MTC may seek additional funding to implement these tasks.

Following approval, the Contractor will prepare a detailed scope of work, budget and schedule to develop and implement the enhancement. The Contractor shall implement the Scope of Work upon Task Order approval. Scopes of Work for enhancements shall include some or all of following elements depending on the size of the task, magnitude of the effort, and potential risk, and as directed by the MTC Project Manager:

- Enhancement description
- Purpose of enhancement
- Estimated level of effort
- Potential risks
- Potential impact on other system components
- Fall-back plan and triggers for resorting to fall-back plan
- Schedule for design, development, testing, implementation and maintenance
- Systems Engineering Management Plan (SEMP)
- Concept of Operations (or addenda)
- System and Software Requirements and Specifications
- Detailed Definition of Interfaces
- Interface Control Document (or addenda)
- Configuration Management Plan (or addenda)
- Software Design Document (or addenda)

- Design standards and approaches to ensure that features of the new application are accessible and compatible with the 511 sister pages and short and long-term plans for the 511 Website, 511.org, and MY 511[SM] (or addenda)
- Approach to address required changes to other system components to accommodate the enhancement
- Any necessary transition plans
- Verification and Validation Plan
- System Acceptance Test Plan (or addenda)
- In-House Prototype Testing
- Field Deployed Testing
- Incremental Testing Results
- Test Report
- Software Configuration Control System Updates
- Maintenance Plan and warranty
- User's Manual
- System Administration Manual

Deliverables

Task/Subtask	Deliverable	Frequency
VI	Detailed scope of work, budget and schedule to support Task Order development.	As needed

VII. NEW CONTRACTOR RESPONSIBILITIES

Project Element VI tasks are not included in the project funding identified in this Request for Proposal. These responsibilities will only be incorporated into the contract through a contract Change Order.

A. Closed Caption Television (CCTV)

Work with Caltrans to increase communications capacity and put additional CCTV traffic camera images on the traffic website.

B. Vehicle Infrastructure Integration (VII)

The National Vehicle Infrastructure Integration (VII) Initiative is a cooperative effort among USDOT, state governments, and the automobile industry to support development of an information infrastructure for ongoing real-time data communications with and among vehicles to enable a number of safety, mobility, and commercial applications. An implemented VII network will enable travelers to access traffic condition and routing information for multiple modes of travel, receive warnings about imminent hazards, and conduct electronic payment transactions within their vehicles (e.g., tolls, parking payment).

MTC is a member of the national VII effort, the VII California effort and the SafeTrip-21 initiative, which is based in California. MTC's traffic contractor provides technical and program management support for several aspects of VII: VII tolling in the Bay Area; establishment of the Bay Area's Service Delivery Node and its connection to the VII national network; backhaul support for the California VII test bed; and, integration of VII data and mobility applications into the 511 system as required.

Possible tasks include:

1. Support ongoing operations and management of the VII California test bed.
2. Coordinate with and participate in the VII National Working Group and the VII California Working Group (Caltrans and its contractor(s), auto manufacturers, etc.). Participate in VII strategic planning and apply national or California-wide decisions and protocols as necessary.
3. Procure, install, and/or maintain backhaul communications equipment and process data.
4. Develop end user applications related to traveler information and VII (e.g., provide 511 map interface in on-board equipment).
5. Support the Bay Area's Urban Partnership Program.

More information about the VII initiative can be found on RITA's website, http://www.its.dot.gov/itsnews/fact_sheets/vii.htm.

C. Multiple Language Assistance

Assess options, provide recommendations and coordinate with 511 sister pages to provide multiple language assistance on the phone and website. Following MTC approval, implement strategies.

D. Archived Data Planning Tool

Provide a tool to use archived 511 data for regional planning, diagnostics and performance monitoring analyses.

E. Comprehensive 511 Comment Management

Manage comments received through 511 web and phone services for all 511 services, including traffic, real-time transit, static transit, ridesharing, bicycling and the 511 homepage.

F. Caltrans' Traffic Management Center (TMC).

Subject to agreement with CHP and Caltrans, perform certain functions in support of the Caltrans District 4 Traffic Management Center (TMC). Functions could include managing the Changeable Message Sign (CMS) program, providing a data feed of calculated driving times to the Changeable Message Signs, operations support for the TMC, or supplement TMC staff.

APPENDIX A-1 KEY PERFORMANCE INDICATORS AND ASSOCIATED PAYMENT DEDUCTIONS

Providing accurate and reliable traffic information is a primary objective of the 511 Traffic contract. Payment deductions will be made from the lump sum payment due for Project Elements I - IV if the Contractor fails to meet the key performance indicators defined below. These indicators are 1) system availability, 2) system accuracy and 3) voice response quality.

MTC has the right to subtract $10,000 from the Contractor's next monthly invoice for Project Elements I – IV for each performance standard not achieved in a given month (i.e., up to $30,000 per month). Such deductions are not recoverable in future months. MTC is entitled to make such deductions even if the inability to achieve the standard was due to a subcontractor (e.g., hosting facility, etc), a service provider (e.g., phone company, purchased traffic data provider), or a project partner (e.g., Caltrans, transit agencies). It is MTC's intent that the Contractor will aggressively work with such third-parties to ensure that standards are met. However, causes defined as a Force Majeure in *Appendix H, MTC 511 Traffic Contract Terms and Conditions*, Article 10.1 will not result in a payment deduction.

The payment deduction strategy will not be applied to the Contractor during a contract transition period.

I. System Availability (Phone and Web) –

The 511 phone, traffic.511.org and my511.org must be available at least 99.72% of the time (less than 2 unavailable hours) per month. System availability refers to the time the system is running without experiencing Total or Major Failures. A Total Failure occurs when traffic.511.org, 511.org or the 511 phone system is unavailable to users for 10 minutes or longer. A Major Failure occurs when one or more specific phone or web feature(s) are not available for users for 10 minutes or longer.

Examples of Total or Major Failures include:

- 511.org, traffic.511.org or my511.org is inaccessible to the public,

- A failure in the data collection and processing system that prevents the transmission of real-time traffic or transit data to the 511 phone and/or web systems. This could result in the unavailability of driving times, slowdowns, incidents, transit departure times, etc. Note that failure of an individual field device, a disruption in the Caltrans' data feed, or a disruption in the real-time transit data feed from transit agencies is not considered a total or major failure.

- A failure in the manual data entry system (i.e., EDFS) that prevents transmission of incident/event information to the 511 phone and/or web systems, e.g., a complete inability of TIC operators to enter, update, expire, or process information. Note that the

inability to enter, update or expire an individual incident/event is not considered a total or major failure.

- A failure in the Data Dissemination System that prevents transmission of information to end users via the phone and/or web system. This could result in:
    - The unavailability of any dissemination feature (e.g., driving times, traffic map, transit departure times, etc),
    - Phone system-wide busy signals, roll-overs to NVP-lite, the failure of NVP-lite, system-wide inability to transfer calls out of 511,
    - Inability of the traffic page to process user requests,
    - Failure of text or email alerts to MY 511 users,
    - Failure of the data feed to the Caltrans changeable message signs, and
    - Failures in the TOMS system.

- Inability to restore the system after a regularly scheduled maintenance window.

The Contractor will track all failures (total, Major and Minor) in the system reliability database located on ProjectSolve. The Contractor will enter all failures within 24 hours of their occurrence. The Contractor shall provide a Log of Major and Total Failures in the monthly progress report, which provides information per the functional requirements. MTC 511 staff routinely spot check to confirm that entries into the system reliability database have been made correctly.

System failure data will be taken from the database. All Total and Major Failure downtimes, regardless of reason, will be included in the calculation. Minor Failures and scheduled maintenance windows will not be included. If a Major Failure occurs intermittently for 20 minutes or longer (such as intermittent rollovers to NVP-lite) the failure time shall be calculated as the time from the start of the intermittent outage to its end, divided by 2. If a Major Failure occurs during a non-holiday, weekday peak period (defined as 6am to 9am and 3pm to 7pm) or during six (6) designated week-ends defined two weeks in advance by MTC, then the total failure time during these designated times will be multiplied by 2. This is considered a double penalty. To prepare for the designated week-ends, Contractor may add two hours to the previous week-end's maintenance window.

For each month that availability falls below the 99.72% level, MTC has the right to subtract $10,000 from the Contractor's next monthly invoice for Project Elements I - IV.

The Contractor shall submit a memorandum, with the monthly invoice, detailing the steps being taken to improve system availability for months when it falls below 99.72%. The invoice will not be processed until the stated actions have been taken or until MTC is confident that they will be taken.

II. System Accuracy

The overall System Accuracy shall be at least 92% each month. System Accuracy will be based on the accuracy of 511 Driving Times, Traffic Conditions, Departure Times, TIC SOP compliance for incidents and TIC SOP compliance (post-audit).

The Performance Monitoring Standard Operating Procedures (SOP) (available at http://www.mtc.ca.gov/jobs/) define, in detail, how these values will be measured. A summary of the procedures for each accuracy value is given below:

- Driving Times: MTC will conduct probe vehicle driving time runs to compare actual driving times against the driving time posted on 511 phone and traffic.511.org. During each segment of the run, the driving time disseminated by 511 phone and traffic.511.org shall be recorded three times: 1) at the beginning, 2) during, and 3) end of each segment. The average disseminated driving time is compared to the actual driving time and is defined as accurate if it is within +/- 20 percent. A minimum of 6 runs (three runs plus the corresponding runs in the reverse direction) per month with a minimum distance of 30 miles per run shall be conducted for this calculation. One run will be performed during the morning commute; one run during mid-day; and one run during the afternoon commute, with each of these runs representing three segments to record. The first segment is from origin to destination, the second segment is from origin to some point in between the origin and destination, and the last segment is from this in-between point to the destination. This method will result in a minimum of 18 data points per month to use to measure 511 Driving Times accuracy. 511 Driving Times accuracy will be the percentage of data points that are accurate.

  For example, if the average disseminated driving time on one segment was 19 minutes and the actual driving time during the driving test was 25 minutes, this segment would fail the accuracy standard, because the disseminated driving time was 24% lower than the actual driving time. If this were the only segment of the 18 tested segments that failed, the total 511 Driving Time accuracy would be 17/18, or 94.4%

- Traffic Conditions: MTC will conduct sample measurements during each segment of the driving times runs to compare the accuracy of incidents and traffic slowdowns reported by 511 phone and traffic.511.org against the actual ground truth, including slowdowns during the drive. Separate measurements are taken for 511 phone and traffic.511.org accuracy. If both the performance monitoring run and 511 phone report no incidents or slowdowns, the measurement is recorded as accurate. Likewise, if both the performance monitoring run and traffic.511.org report no incidents or slowdowns, the measurement is recorded as accurate. If the performance monitoring run and 511 phone do not report matching incidents or slowdowns, the measurement is recorded as inaccurate. If the performance monitoring run and traffic.511.org do not report matching incidents or slowdowns, the measurement is recorded as inaccurate. The inaccuracy will not count toward the traffic conditions accuracy calculation if the incident information in the 511 system matches the information in the CHP CAD. The overall 511 phone traffic

conditions accuracy is the percentage of observed incidents and slowdowns that match the disseminated information on 511 phone. Likewise, the overall traffic.511.org traffic conditions accuracy is the percentage of observed incidents and slowdowns that match the disseminated information on traffic.511.org. For example, if the field test observes 6 incidents and 8 slowdowns along the driven roadway segments, and if 511 phone disseminated data is matching for 5 incidents and 5 slowdowns, overall 511 phone accuracy would be 10/14, or 71.4%. The total traffic conditions accuracy is the average of the overall 511 phone accuracy and the overall traffic.511.org accuracy.

- Departure Times: MTC will conduct sample observations throughout the month to compare the prediction and configuration data supplied by each transit operator with what is disseminated on 511 phone, web, and MY 511. MTC staff will compare prediction and configuration data logs to what is heard and seen on 511 services. Staff will use the Universal Time Clock to ensure time synchronicity when comparing prediction data. Staff will take twenty (20) monthly observations for prediction data and twenty (20) for configuration data and calculate the percent accuracy for each data type. The total monthly Departure Times accuracy will equal the average of the two data type percentages.

- TIC SOP Compliance (Incident Accuracy and Timeliness): MTC will conduct sample observations throughout the month to compare traffic incidents reported on CHP CAD against incidents reported on 511 and traffic.511.org. MTC will compare 1) incident type, 2) direction of travel, route, location (cross-street), and 3) severity (lanes blocked). MTC will determine the percentage of samples where the 511 information is accurate, and the percentage of samples where the information was disseminated on 511 within 5 minutes of when the incident was verified via the CHP CAD. Overall, accuracy values will be weighted at 40% for the incident accuracy reported on 511 and 40% for the incident accuracy reported on traffic.511.org, and 20% for the timeliness of data input. A minimum of 20 samples per month is required for this calculation. If the incidents on 511 and traffic.511.org do not match the CHP CAD, Contractor will be given the opportunity to prove that the CHP CAD was inaccurate. If MTC accepts the proof, then the sample will be counted as accurate. If the incidents on 511 and traffic.511.org match the CHP CAD, but MTC is able to prove that the CHP CAD is inaccurate and through Standard Operating Procedures (SOP) compliance the TIC operator should not have posted the CHP CAD data, then the sample will be counted as inaccurate.

  Accuracy is calculated as the sum of:

  40% multiplied by the percentage of samples where the incident description on 511 Phone matches the description in the CHP CAD , plus
  40% multiplied by the percentage of samples where the incident description on transit.511.org matches the description in the CHP CAD, plus
  20% multiplied by the percentage of samples where an incident is heard/seen on 511 within 5 minutes of verification

- TIC SOP Compliance (Post-Audit): MTC will conduct a post-audit of TIC operator conformance to the TIC SOP of one significant traffic incident and one significant transit incident. A significant traffic incident is defined as more than 50% of the lanes on freeways or bridges that are closed for one hour or more. A significant transit incident is defined as a system-wide delay lasting 30 minutes or more for any of the following agencies: Altamont Commuter Express (ACE), BART, Caltrain, and MUNI light rail systems. At its discretion, MTC could conduct a post-audit of a major construction event, such as a Bay Bridge Seismic Retrofit closure.

  Traffic incident compliance is the percentage of 21 procedures that were correctly followed. For example, 20/21 = 95%. Transit incident compliance is the percentage of 6 procedures that were correctly followed. For example, 4/6 = 67%. The overall SOP Compliance (Post-Audit) accuracy percentage will equal the average of the traffic and transit incident compliance percentages.

Overall System Accuracy is calculated as the sum of:

25% multiplied by Driving Times accuracy percentage, plus
35% multiplied by Traffic Conditions accuracy percentage, plus
20% multiplied by Departure Time accuracy percentage, plus
10% multiplied by SOP Compliance accuracy percentage, plus
10% multiplied by SOP Compliance (Post-Audit) accuracy percentage

The weights applied in the above calculation are subject to change if the usage of the system features changes. For each month that the overall System Accuracy falls below 92%, MTC has the right to subtract $10,000 from the Contractor's next monthly invoice for Project Elements I - IV. The Contractor shall submit a memorandum, with the monthly invoice, detailing the steps being taken to improve the System Accuracy for months when the System Accuracy falls below 92%. The invoice will not be processed until the stated actions have been taken or until MTC is confident that they will be taken.

III. Voice Response Quality –

Voice response quality shall be at least an average of 70% in any given month as determined from the monthly Voice Recognition Report. The percentage will be reported on the Monthly Performance Monitoring Report.

If the monthly voice recognition report shows a recognition quality between 70% and 75%, the Contractor shall submit a memorandum that details the steps being taken to improve the quality. For each month that voice response quality falls below 70%, MTC has the right to subtract $10,000 from the Contractor's next monthly invoice for Project Elements I - IV.

For each month that voice response quality falls below 70%, the Contractor shall submit a memorandum detailing the steps being taken to improve the quality. This shall be submitted with the monthly invoice. The invoice will not be processed until the stated actions have been taken or until MTC is confident that they will be taken.

IV. Summary of Key Performance Indicators, Standards and Associated Payment Deductions

Performance Indicator	Standard	Penalty
System availability	99.72% availability	$10,000 for each month of non-compliance
System accuracy	92% overall accuracy	$10,000 for each month of non-compliance
Voice response quality	70% average on voice recognition report	$10,000 for each month of non-compliance

APPENDIX A-2 FUNCTIONAL REQUIREMENTS

This appendix lists the functional requirements for the work to be conducted by the Contractor as outlined in *Appendix A, Scope of Work*. To the extent possible, the functional requirements are organized according to the sequence of tasks in the Scope of Work. Note that not all tasks have associated functional requirements, while some have several. In addition, some functional requirements span more than one task. The tasks to which the functional requirements apply are listed in parentheses next to the header under which they fall.

The functional requirements listed in *Appendix A-2* are specific to the current system as well as the current technologies used. MTC recognizes that system technology could change in order to meet project goals and that some of the functional requirements will either need to be changed and/or that the intent of these Functional Requirements could be met by other, equivalent systems.

PROJECT MANAGEMENT (PROJECT ELEMENT I)

PROJECT PLANNING (TASK I.A)

There are no functional requirements associated with task I.A.1 to I.A.6.

PROJECT ADMINISTRATION (TASK I.B)

There are no functional requirements associated with tasks I.B.1 to I.B.10.

1. Annual Work Plan Status Tool (Task I.B.11)

1. Annual work plan status shall be tracked through an easy-to-manipulate spreadsheet.
2. The tool shall be set up to provide, at a minimum, the following information for each task and subtask within the scope of work: status of task progress, status of deliverables related to the task, issues and needs, related assignments or action items, issues resolution, implications for the Five-Year Strategic Plan or future Work Plans, and next steps.
3. The tool shall be maintained on ProjectSolve and will be accessible by MTC staff.
4. The tool shall produce a monthly report or print-out showing the items identified above.

2. Configuration Management Tool (Task I.B.12)

1. The configuration management tool shall:
   a. Track the status of system changes and related maintenance activity to document system changes and to track action items.
   b. Be accessible by MTC and Contractor staff to assign follow up, enter status updates, and check status at any time.
   c. Track date and author of modification
   d. Track details of modifications
   e. Track reason/need for modification
   f. Provide version tracking (which version was changed and name of new version)
   g. Track how the change impacts other systems or features

h. Track who is responsible for testing the change
i. Track who confirms the change is in place
j. Track who approved the change (from MTC)
k. Track possible risks involved with change
l. Produce a report that includes those items identified above.

3. Equipment and Software Inventory Database (Tasks I.B.13)

1. The equipment and software inventory database shall include:
   a. A complete inventory of all equipment and software, including all software required to operate the software, including operating systems, libraries, tools and utilities, data base structures and code and compilers; to alter/edit the source code; and/or to successfully recompile the software,
   b. Equipment/software description,
   c. Manufacturer's serial number,
   d. MTC equipment label number,
   e. Purchase price
   f. Date of purchase,
   g. Expected Mean Time Between Failures,
   h. Date of retirement if applicable,
   i. Location of equipment/software,
   j. Configuration control process used for software either developed or modified by Contractor,
   k. Software license information, license number, expiration dates and usage restrictions
   l. MTC's rights in all software,
   m. Warranty information,
   n. Warranty expiration date,
   o. Vendor contact information, and
   p. Reporting capabilities.
2. The biannual software and equipment list(s) shall include:
   a. Whether the software is MTC Software or Restrictive Software or Commercial Software,
   b. Software/equipment manufacturer and model,
   c. Designation of the software/equipment function, and
   d. Location.

PROJECT COORDINATION (TASK I.C)

There are no functional requirements associated with tasks I.C.1 to I.C.9.

.

PERFORMANCE MONITORING (TASK I.D)

4. Data Dissemination Methods Statistics Tracking – General (Task I.D.1 - 2)

1. Data dissemination statistics shall be provided in weekly and monthly reports. The week shall be defined as Monday through Sunday.
2. Statistics tracking tools shall maintain the capability to generate reports for other specific durations (e.g., daily, several weeks, etc.) as well as special-needs reports.
3. Web logs that are used to generate usage statistics shall be archived on a daily basis.
4. Data shall be available within one calendar day.
5. Online statistics tracking tools shall provide access to MTC staff and allow MTC staff to pull statistics on demand for any chosen time period.
6. Weekly and monthly statistics reports shall be maintained on the ProjectSolve website.
7. Reports shall be modified or created to address 511 system changes, new feature launches, and MTC reporting needs.
8. Data shall be maintained from project inception to ensure continuous tracking of cumulative usage.
9. The Contractor shall consistently track data across web tracking tools, i.e., common standards and definitions must be employed and be verifiable.

5. Data Dissemination Methods Statistics Tracking – Traffic.511.org, 511.org, my511.org (Task I.D.1 - 2)

1. The online tool to track statistics for traffic.511.org, 511.org, and my511.org shall, at a minimum, track:
   a. User IP addresses
   b. User browsers
   c. User sessions/visits
   d. Unique visitors
   e. Hits
   f. Clicks
   g. Page views
   h. Downloads
   i. Referrals
   j. Results generated (e.g., the number of driving times generated from the Traffic and Driving Times map)
   k. Overall page usage (defined as the sum of page views for particular features)
   l. Data loss
3. Users shall be defined by IP addresses and browsers shall be used to define a user.
4. One website user session shall be defined as an IP address and browser and 10 minutes or more between hits in a log file.
5. Reporting tools shall provide reports integrating phone and web usage to facilitate monitoring of overall trends in how 511 is accessed and utilized.
6. The online tool must also, at a minimum, track the following additional statistics for my511.org:
   a. Number of registrations

b. Number of verifications
c. Number of traffic-only registrations
d. Number of transit-only registrations
e. Number of sign-ups for traffic and transit
f. Number of homepage page views
g. Number of camera page views
h. Number of traffic info page views
i. Average number of home page views per user
j. Number of users that want traffic first on the phone
k. Number of users that want transit first on the phone
l. Number of users signed up for e-mail alerts
m. Average number of e-mail alerts per user
n. Number of users signed up for text alerts
o. Average number of text alerts per user
p. Number of alerts sent
q. Number of hits on the FAQ and the most popular requested question for the week
r. Number of hits on the glossary and the most popular requested term for the week
s. Average number of traffic trips registered per user
t. Average number of transit trips registered per user
u. Average number of camera views per user
v. Average number of phone numbers registered per user

6. Data Dissemination Methods Statistics Tracking – 511 Phone (Task I.D.1 - 2)

1. Phone statistics shall include the number of calls, requests, transfers, ANIs, results generated, and any other summary data.
2. At a minimum, the Contractor shall maintain the following weekly phone system reports:
   a. Access Type Report – provides the number of calls broken down by 'with ANI'/'without ANI' and by 'landline' or 'cellular.'
   b. Agency City Report – provides the number of requests by city and county within the Transit Agencies menu.
   c. Agency Report – provides the number of requests for individual transit and paratransit agency menus.
   d. Agency Submenu Report – provides requests for submenus for individual transit agencies.
   e. Airport Report – provides the number of requests for the individual airport submenus.
   f. All Nighter Report – provides the number of requests for the All Nighter menu by 15-minute period.
   g. Alternate Transportation Report – provides the number of requests for all menus and associated submenus, except for Traffic and Transit.

h. Area Code Report – provides the number of calls originating from the Bay Area area codes.
i. Driving Times Location Report – provides the number of requests for each location as a starting or ending point within the Driving Times menu.
j. Driving Times Refine Points Report – provides the number of requests for each refine point location as a starting or ending point within the Driving Times menu.
k. Driving Times Top 10 Trips Report – provides the number of requests for the top ten most requested trip pairs.
l. General Report – provides the number of calls for the following: comments, voice only, touch tone only, touch tone and voice, no selection calls, no selection calls for traffic, no selection calls for transit, no selection calls for rideshare, no selection calls for bicycling, maximum simultaneous calls, NVP Lite calls, total calls.
m. Menu Report – provides the number of requests for various menus.
n. NextBus Route Request Report – provides the number of requests for each transit agency route.
o. NVP Lite Agency Report – provides the number of requests for each transit agency in the NVP Lite menu.
p. Operating Company Report – provides the number of calls from each operating company.
q. Shortcut Report – provides the number of requests for the transit agency and menu shortcuts.
r. Time Frame Report – provides the number of calls, including NVP Lite calls, and the average call length by 15-minute period.
s. Traffic Conditions Location Report – provides the number of requests for locations within the Traffic Conditions menu.
t. Weekly Summary Report – provides an abbreviated version of the Menu Report.
u. MY 511 Reports (placeholder text; awaiting input from Andrew)

7. At a minimum, the Contractor shall maintain the following monthly phone system reports:
   a. General Monthly Report – provides the number of calls for the following: total weekday calls, total weekend calls, total no selection calls, peak date, peak hour, maximum simultaneous calls, total calls.
   b. Monthly ANI Report – provides the number of new callers (ANIs) for that particular month.
   c. Monthly ANI Report since 01/01/2003 - provides the number of new callers (ANIs) since 01/01/2003.
   d. Monthly Menu Report – provides the number of requests for various menus.
   e. Monthly Usage Report – provides the number of requests for various menu items that comprise traffic and transit usage.
   f. Unique ANI Report – provides the number of unique callers organized by the number of times they called since 01/01/2003.

g. Unique ANI by Month Report - provides the number of unique callers organized by the number of times they called in a particular month.

8. The Contractor shall also maintain all reports for MY 511 and 511 Departure Times, which are currently in development.

7. Data Dissemination Methods Statistics Tracking –E-mail, Text-Based, and Mobile Device Communications (Task I.D.1 - 2)

1. Tracking customer interaction with e-mail, text-based, and other mobile device communications (e.g., alerts, e-blasts, desktop widgets), shall include, at a minimum, the following:
   a. Registrations
   b. Downloads
   c. Alerts sent
   d. Open Rate
   e. Clicks
   f. Forwards
   g. Subscriptions/Unsubscriptions
   h. Bounces.

8. Event-specific Reports (I.D.5)

1. Event-specific reports shall include downtime of the entire system or individual components, usage of emergency menus, call volumes, number of ports utilized, number of overflow calls sent the secondary system, number of web sessions, percentage web server capacity utilized, etc.

9. System Reliability Database (Task I.D.6)

1. The contractor shall enter the date, time and duration of failure in the system reliability database.
2. The Contractor shall record who reported the failure and who recorded it into the database.
3. The Contractor shall enter system, subsystems, and components affected in the system reliability database.
4. The Contractor shall enter a description of failure in the system reliability database.
5. The Contractor shall classify failures as total, major or minor as defined in the database as of contract execution.
6. The Contractor shall enter whether the failure was a double penalty failure.
7. The Contractor shall record the impact of the failure on 511 systems
8. The Contractor shall maintain a Resolution Log in the system reliability database.
9. The System Reliability Database shall include reporting capability to produce reports of all failures and their details on a monthly basis
10. The System Reliability Database shall include the ability to produce standard monthly reports and also ad-hoc reports
11. The Contractor shall document points of failure at the co-location facility in the system reliability database.

12. The Contractor's Log of Major and Total Failures shall include the above fields of information.

CUSTOMER COMMENT MANAGEMENT (TASK I.E)

10. Customer Comment Response (Task I.E.1)

1. Review user comments each weekday.
2. Respond to, close or assign comments for further action within one day of receipt.

11. Customer Comment Reports (Task I.E.2)

1. The customer comment report for the phone shall, at a minimum, include the following fields: date, performance issue/marketing, comment paraphrase, file reference, requires response, action taken, positive/negative/neutral, requires response, total comments, desired additional features, performance issues, marketing issues.
2. The customer comment report for the web shall include comments coming in to traffic.511.org, my511.org, and traffic and real-time transit comments from 511.org and real-time transit comments from transit.511.org.
3. The customer comment report for the web shall, at a minimum, include the following fields: date, performance issue/marketing, comment paraphrase, e-mail address, requires response, action taken, positive/negative/neutral, requires response, total comments, modal topic area, performance issues, marketing issues.

SYSTEM REQUIREMENTS (APPLICABLE TO MULTIPLE TASKS IN PROJECT ELEMENTS II, III, AND IV)

12. General System Requirements (Applies to the system, regardless of specific task)

1. Data collection, processing and dissemination systems shall be redundant.
2. The internal network shall be redundant to reduce downtime due to internally controlled outages.
3. Hardware shall be redundant so if one server goes offline due to planned maintenance or unscheduled emergency, other server(s) can take the load.
4. Redundant servers are to take over when the primary server is down (e.g., for routine maintenance) to support 24x7 operations.

13. System Operations & Maintenance Requirements (Applies to all tasks in Project Elements II & III)

5. The system shall be able to operate unattended 24 hours a day, seven days a week.
6. All system software, hardware, and data feeds (except for TrafficWatch field equipment) shall have be available (i.e., operating without major or total failures) 99.72% of the time.
7. The annual mean time to repair system failures shall be not greater than two hours. Repair time is the time between the discovery of a failure and the correction of the failure.
8. The Contractor shall discover and inform MTC of major failures within two hours of occurrence.
9. Begin corrective action (e.g., repair, response or developing a strategy for approval) immediately upon discovery of a failure.
10. Respond within two hours of discovery of an event and have physical access to system equipment located at the hosting facility.
11. All system design documents shall be maintained to reflect on-going changes and shall, at any given time, reflect current system status.
    a. Current versions of all system design documents shall be uploaded to ProjectSolve.
9. The system shall provide automatic monitoring and issue notification. If outages occur, appropriate administrative staff shall be automatically notified via email and text message in order to limit downtime.
10. Scheduled maintenance shall only occur between 10 PM and 3 AM (PST).
11. The 511 system shall support response times of no longer than two (2) seconds for requests from 511 users and 511.org users for real-time traffic and real-time transit prediction information.

14. Electrical Provisioning for 511 Equipment (Applies to the system, regardless of specific task)

1. The Contractor shall ensure that both A-side and B-side electrical infrastructures be available and configured to meet the equipment needs.
2. The Contractor shall ensure that sufficient capacity is available to instantaneously assume full support of MTC's equipment in the event of a failure of any portion of the facility-level electrical infrastructure; circuits in normal state shall be provided as necessary and configured to use no more than 40% of its rated capacity. [For example, a load of 16A would be distributed between two 20A circuits, resulting in a load of 8A per circuit; in

the event of an electrical infrastructure failure, the remaining circuit could successfully support the entire 16A load.]

3. The Contractor shall monitor, on a pre-scheduled basis, electrical requirements of MTC's equipment, ensuring that in normal state no phase of any circuit exceeds 40% of its rated capacity. Contractor shall provide written documentation to MTC at least quarterly.
4. The Contractor shall identify, document, and deliver to MTC written notice regarding:
   a. Any and all known single points of failure within the collocation/data center facility relative to electrical provisioning; such notice shall be provided at least 15 days prior to relocation of MTC's system (if applicable), with updates provided as conditions change but no less than annually
   b. Any scheduled and unscheduled shutdown or failure of electrical system components in excess of five minutes

15. Computer Room Air Conditioning (CRAC) Provisioning for 511 Equipment (Applies to the system, regardless of specific task)

1. The Contractor shall calculate the cooling needs of MTC's equipment and of all nearby equipment; ideally, such calculations shall be based on the highest regularly observed electrical load drawn by such equipment (rather than by relying on nameplate electrical data). Based on such calculations, the Contractor shall add a factor of not less than 40% to allow for miscellaneous heat rejection from sources such as transient heat (including weather conditions), lighting, personnel, and other factors. Total calculated heat rejection and miscellaneous heat rejection (as described above) shall be used to determine the minimum cooling capacity that must be provided in immediate proximity to the cold aisle at MTC's equipment.
2. The Contractor shall ensure that MTC's equipment as well as immediately adjacent equipment (within the Contractors control) is provided with CRAC capacity:
   - At the cold aisle for immediate use by MTC's equipment
   - As calculated above on a 24x7x365 basis (e.g., BTU/hr.)
   - Within a temperature fluctuation not exceeding ±2°F within any one-hour period
3. The Contractor is required to ensure that CRAC capacity is available for immediate use by MTC's equipment be provisioned in a fully-redundant manner, allowing A-side CRAC facilities to be fully assumed by B-side CRAC provisions, and vice versa, without any decrease in delivered cooling capacity or airflow volume.
4. The Contractor shall identify, document, and deliver to MTC written notice regarding:
   a. Any and all known single points of failure within the collocation/data center facility relative to CRAC provisioning; such notice shall be provided at least 15 days prior to relocation of MTC's system (if applicable), with updates provided as conditions change but no less than annually
   b. Any scheduled and unscheduled CRAC shutdown or failure exceeding five minutes.

16. Physical Equipment Mounting (Applies to the system, regardless of specific task)

1. The Contractor shall ensure adequate equipment cabinet/rack capacity to allow the equipment to be mounted in a manner that fully leverages "hot aisle/cold aisle" CRAC provisioning as commonly practiced in modern data center environments.

2. The Contractor is required to mount MTC’s equipment in a manner consistent with the cooling needs of the various components.

DATA COLLECTION AND PROCESSING (PROJECT ELEMENT II)

TRAFFIC DATA COLLECTION (TASK II.A)

17. Operate and Maintain the Traffic Data Collection and Processing System (Task II.A)

1. The Contractor shall collect traffic status, in the form of traffic speed or travel time.
2. Traffic speeds must be provided in one (1) mile per hour increments or the metric equivalent.
3. Travel time must be provided in one (1) minute increments and provided over roadways listed in requirement #17.4.
4. Provide 100% coverage for traffic speed and travel time on the following roadways
   a. San Francisco Oakland Bay Bridge, Golden Gate Bridge, San Mateo Bridge, San Rafael Bridge, Dumbarton Bridge, Carquinez Bridge, Benicia Bridge,
   b. Interstate 80 - San Francisco to Fairfield,
   c. Interstate 680 - Fairfield to San Jose,
   d. Interstate 880 - Oakland to San Jose,
   e. Interstate 580 - San Rafael to I-205,
   f. US-101 - San Benito County line to San Francisco,
   g. US-101 - San Francisco to Windsor,
   h. Interstate 280 - San Jose to San Francisco,
   i. Interstate 780 - I-80 to I-680,
   j. Interstate 980 - I-880 to I-580,
   k. Interstate 238 - I-880 to I-580,
   l. Highway 17 - Santa Cruz to I-280,
   m. Highway 4 - I-80 to Antioch,
   n. Highway 13 - I-580 to Hwy 24,
   o. Highway 24 - I-580 to I-680,
   p. Highway 37 - US-101 to I-80,
   q. Highway 84 - US-101 to I-880,
   r. Highway 85 – US-101 in Mountain View to US-101 in San Jose,
   s. Highway 237 - Hwy 85 to I-680,
   t. Highway 87 - US-101 to Hwy 85,
   u. Hwy 92 – Hwy 1 to I-880,
   v. Highway 242 - I-680 to Hwy 4
   w. Route 1 - Half Moon Bay to Montara,
   x. Route 13 - I-580 to I-24,
   y. 19th Avenue in San Francisco - I-280 to Hwy. 101,
   z. Hwy. 101 (Van Ness/Lombard) in San Francisco - Central Freeway to Route 1
5. Monitor all data sources on a daily basis to ensure accurate and continuous data and notify MTC and the contractor data collection lead of failures on a daily basis.

6. If more than 3% of purchased traffic data sources are shown to be non-functional, Contractor should contact the data provider via email within 24 hours.
7. Each TrafficWatch reader shall transmit data at least 75% of the time between 6 am and 10 pm.
8. When a reader fails to meet the data transmission requirement for seven (7) consecutive calendar days, the Contractor must conduct an on-site assessment of the reader within seven (7) calendar days and conduct repairs immediately or provide an action plan for MTC approval.
9. Maintain a 10% supply of TrafficWatch replacement parts.
10. If the reason the reader is not functioning is attributable to the Caltrans power supply, then Contractor is to notify Caltrans via email within 24 hours and will follow-up with Caltrans on a 3-day interval.
11. TrafficWatch shall generate speed and travel time data in kilometers per hour (kph) in whole values, which conforms to the NTCIP Center-to-Center standard for data exchange.

18. Automated Link Data Fusion (ALDF) Including the CORBA to Framework (C2F) and Link Data Interpolator (LDI) Components (Task II.A)

1. The Contractor shall collect traffic status, in the form of either traffic speed or travel time.
2. The ALDF System shall provide link status, including speed in kilometers per hour and travel time in seconds.
3. Traffic speeds must be provided in one (1) mile per hour increments or the metric equivalent.
4. ALDF will generate speed data in kilometers per hour (kph) in whole values, which conforms to the NTCIP (National Transportation Communications for ITS Protocol) Center-to-Center standard for data exchange.
5. Travel time must be provided in one (1) minute increments or less and provided over segments agreed to by MTC. ALDF will generate travel time data in whole values in seconds, which conforms to the NTCIP Center-to-Center standard for data exchange.
6. Maintain the ALDF system to compare traffic speed data sources and select a winning source based on algorithms. When current data sources are not available or reliable, ALDF will supplement live data sources with 'historical' and/or interpolated data.
7. Traffic status (speed and travel time) shall be updated at least every ninety seconds and shall have a latency of not more than ninety seconds when it first appears on 511. ALDF shall update traffic status (speed and travel time) at least once every ninety seconds. Additionally, the 90-second latency requirement will be based on the time data is received by ALDF.
8. The system shall allow TIC staff to manually override the ALDF link speed (currently supported by the Congestion OI application).
9. The system shall allow TIC staff to manually override the ALDF to indicate a link is closed (currently supported by the Break-a-Link feature of the Congestion OI application).

19. Caltrans Detector Data Interface (CDDI) Component (Task II.A)

1. The Contractor shall utilize the Caltrans District 4 detector data feed.. The CDDI shall collect and process (e.g., validate) data received from Caltrans detector data feed.
2. The Contractor shall review and evaluate the Caltrans District 4 detector data feeds to ensure compliance with these Functional Requirements.
3. The Contractor shall not use the Caltrans detector data that does not meet these Functional Requirements.
4. Traffic speeds must be provided in one (1) mile per hour increments or the metric equivalent. CDDI will generate speed data in kilometers per hour (kph) in whole values, which conforms to the NTCIP (National Transportation Communications for ITS Protocol) Center-to-Center standard for data exchange.
5. The data collection system and/or any individual element of the data collection system shall have a mean time between failures of not less than 1200 continuous hours.
6. When a failure occurs, the mean time to repair shall be not greater than 4 hours. Repair time is the time between the occurrence of an error and the correction of the error.
7. Interfaces with subcontractors and public agencies will collect data every 60 seconds.
8. The Contractor shall identify and exclude Caltrans loop detector data is inaccurate.

20. Enhanced Data Fusion System (EDFS) (Task II.A)

9. Data input by the TIC personnel shall become part of the data fusion database.
10. EDFS shall provide a Login function to verify user information (access and functional privileges).
11. The Enhanced Data Fusion System shall be flexible and scalable to accept data from new data sources (accepts other DI – Data Interfaces that meet standards referenced in the Design, (e.g., Data Interfaces) that conform to architecture standards).
12. The Enhanced Data Fusion System shall allow data to be fused within one minute after an operator manually enters the data.
13. The Enhanced Data Fusion System shall allow data to be fused within one minute once an automated feed is received.
14. The Enhanced Data Fusion System shall fuse data so that all information includes accurate descriptions.
15. The Enhanced Data Fusion System will retain enough information from the original data sources so that the information disseminated is useful.
16. The Enhanced Data Fusion System shall conform to ITS national architecture standards for a regional system.
17. The Enhanced Data Fusion System shall process data originating from the CHP CAD system (or its replacement).
18. The Enhanced Data Fusion System shall provide a data fusion system, which combines dynamic and static data into standard formats through semi-automated means.
12. Data shall be dynamically and semi-automatically updated as TIC operators add, update and close events. TIC stall shall be able to view the Event OI interface and the Map interface. During data entry, the event's Description shall be semi-automatically built. Event actions shall accumulate to track an event's history. TIC staff shall be semi-automatically alerted about pending events. TIC staff shall be notified about planned event schedules becoming active. Events shall be auto-located on the map interface.
13. TIC staff shall be able to view and select static information from various pick lists in Event OI and shall be able to display/hide static objects and layers on the map.

14. TIC staff shall be able to manually enter collected information about slowdown/congestion for incidents that occur along the CHP patrolled segments of the San Francisco Bay Area's Metropolitan Transportation System (MTS) network.
15. TIC staff shall be able to enter incident, construction and planned events data into the system that is collected from manual sources or non-automated data feeds.
16. TIC operators shall have the ability to select types of delay (e.g., "1 mile delay"), "Accident" as type, and/or enter details to further describe the severity of the impact, e.g., "SIGALERT", in Event OI's "Other" field for Transit events.
17. The Enhanced Data Fusion System will fuse data in approved standard data formats through semi-automatic means.
18. The Enhanced Data Fusion system shall use the latest available national ITS standards, including but not limited to the following: J2353, J2354, J2369, TMDD, NTCIP and TCIP. The Contractor shall document and seek approval of the specific ITS standard before any enhancement work is done. The contractor shall provide details about how the ITS standards are being used.
19. The Contractor shall make every effort to achieve compliance with National Architecture Standards for any new or modified system.
20. The contractor shall propose which additional standards (if any) will be used and to what extent.
21. TIC staff shall be able to create an event (using the information collected from manual sources) on one workstation, and observe the same event on another TIC workstation.
22. The Enhanced Data Fusion System shall a standard electronic map database, and fused data to show accurate locations and directionality.
23. TIC staff shall have the ability to select a "Direction" for events, which will become part of the event Description. The "directionality" (e.g., west bound, east bound, etc.) shall be observed for events using the Map Info feature.
24. Access to software applications on TIC workstations shall be controlled through a common Logon Security application that will verify users and rights. The System Administrator or users with administrative privilege shall be able to manage user accounts. Operators shall be able to login and out of the workstation applications and change their password.

21. Data Archiving (Task II.A)

1. Provide a continual archive of all historical traffic speed and travel time output data.
2. The database needs to be appropriately sized to accommodate storage needs .
3. The Data Fusion Server shall store the previous calendar year's worth of multi-modal data (e.g., roadway incidents, construction activities).
4. The database shall be appropriately sized to accommodate storage requirements.
5. Data from previous calendar years shall be archived and stored in offline media.
6. Event data from previous calendar years shall be removed periodically from two online EDFS databases:
    a. Previous year data in the local "db_TI_TIC_Event_LocalArchive" will be deleted.
    b. Previous year data in the master "db_TI_EventHistory_Archive" database will be archived onto offline media.

•

OPERATE AND MAINTAIN REAL-TIME TRANSIT DATA COLLECTION AND PROCESSING (TASK II.B)

22. Real-Time Transit General Requirements (Task II.B)

1. The system shall be based on an open architecture including standardized interface definitions and communications protocols.
2. The system shall not need any special or proprietary algorithms for the exchange, interpretation and dissemination of prediction and configuration data at the interface points.
3. The system shall include provisions for adding in levels of redundancy including server and database failover methods and processes.
4. The Contractor shall disseminate real-time transit information through the 511 Departure Times service, which provides real-time transit departure time estimates based on a user-selected stop ID, or an agency name, route number, and cross streets. Real-time transit data shall be disseminated in accordance with regional real-time transit system documentation from the region's transit operators, where the data is available.

23. Real-time Transit Data Interface and System Requirements (Task II.B)

1. The Contractor shall adhere to and maintain the latest versions of the following Real-time Transit system documents:
   a. Regional Real-time Transit System Requirements
   b. Extensible Markup Language (XML) Document Type Definitions (DTDs) for Java Message Service (JMS) Implementation
   c. Extensible Markup Language (XML) Document Type Definitions (DTDs) for Web Services Implementation
   d. Software Functional Requirements Specification Document – Regional Real-time Transit Hub Signs
   e. 511 Real-Time Transit User Interface Requirements
   f. Regional Real-time Transit System Roles and Responsibilities
2. The system shall not collect or publish data from transit agencies not supported by this contract. At the discretion of MTC, any source prediction data received from a supported agency that does not meet performance monitoring criterion shall not be published to all 511 dissemination services.
3. Prediction and configuration data will only be collected and published for those transit agencies defined as "Active".
4. The Contractor shall perform automated and manual quality control and quality assurance checks on the data received by the transit agencies.
5. The Contractor shall work with the transit agencies during any sign ups to incorporate any changes to configuration data. The updates should begin at least two weeks before a transit agency's sign-up or software change goes live to the pubic to ensure that new configuration data is ready for implementation on 511 a minimum of 48 hours prior to the changes going live by the agency.
6. The system shall report and log all errors and alarm notifications.

7. The Contractor shall work directly with the transit agencies or their designated representatives to troubleshoot data transfer procedural and technical problems and data inaccuracies.
8. The Real-Time Transit Data Collection System shall collect the following data
   a. Prediction data with a flag for either departure or arrival data,
   b. Configuration data, such as agency name, route name, route direction, stop/station name, stop ID
   c. Arrival and departure status of vehicle, and
   d. Other data as needed to support expanded functionality (e.g., schedule data).
9. Real-time transit departure times shall be updated at least every one (1) minute.
10. Real-time transit departure times shall be disseminated on regional hub displays using a web page designated for each hub.
11. Do not disseminate real-time information for either an entire transit agency's real-time data set or the data related to selected routes if MTC and determines through performance monitoring that the data quality is consistently inaccurate.
12. Collect data in compliance with the region's real-time transit system architecture, real-time system requirements, and data sharing and storage policy.
13. Provide log files and their interpretation on a regular schedule, not more than monthly or less than quarterly, to MTC to support performance monitoring efforts.
14. When needed, provide support to MTC at Real-time Transit Technical Advisory Committee (TAC) meetings.
15. Upon MTC direction, the Contractor shall add new transit agencies to the regional system and update all related systems accordingly (e.g. 511 phone, 511.org, MY 511, transit hub signage).
16. Maintain and enhance, if directed, the data feed from the Regional Real-time Transit system to 511's real-time transit web features.

24. Real-Time Transit Prediction Requirements (Task II.B)

1. The system shall collect and publish the next three predictions per route/direction/stop combination for departure times of not more than 90 minutes.
2. The 511 system shall update any and all prediction data that is received from each of the transit agency systems within five (5) seconds of receipt of the prediction data.
3. Valid predictions (those that have already been filtered by the transit agency) for existing stops shall be sent on for dissemination to 511 users or to other transit agencies if they have subscribed for them.
4. New predictions for an existing stop received from the transit agencies that have not changed from a previous prediction shall be filtered out and not sent to for dissemination to the 511 users. However, the updates to the timestamp of the prediction shall be updated for dissemination to 511 users or to other transit agencies if they have subscribed for them.
5. If a stop does not have a prediction, it shall be checked against the current list of stops that have predictions. If it is an existing stop, the updated times shall be changed. If the stop is new, it shall be marked as a new and inactive stop and a flag shall be sent to the configuration processor and the event shall be logged.

6. The system shall check new predictions against current predictions. If the difference between the two predictions is one minute or longer, the new prediction shall replace the current prediction. If not, the current prediction shall remain and the new prediction discarded. All new predictions shall be truncated off to the minute before comparing with the current prediction.
7. All predictions with Stop IDs, Route IDs and Route Direction that are not recognized (in the configuration database) shall be filtered out and not sent for dissemination to the 511 user or to other transit agencies. All filtered out predictions shall be logged.
8. All predictions that have times in the past shall be filtered out and not sent for dissemination to the 511 users or to other transit agencies.
9. The 511 system shall support response times of no longer than two (2) seconds for requests from 511 users and 511.org users for real-time prediction information.

25. Real-Time Transit Configuration Data Requirements (Task II.B)

1. The 511 System shall perform quality control checks on the stop names and stop IDs provided by the transit agencies. The quality checks shall compare the existing and new set of stop names and stop IDs and identify any changes or differences. Any changes or differences shall be logged.
2. A new set of stop names and stop IDs shall be verified such that each stop name has an associated stop ID and that there are no duplicate stop IDs from an agency.
3. For agencies using the RTD data extraction tool, the 511 real-time transit system shall have an ftp server to gather those agencies' configuration data, including test and official releases.

26. Real-Time Transit Logging Requirements (Task II.B)

1. The 511 system shall continuously and automatically monitor and log all prediction data that is published by the transit agency systems. This log of predictions shall be kept for a minimum of one week and shall be able to be generated and printed within that time frame. .
2. The 511 system shall continuously and automatically monitor and log all error notifications that are published to the system administrator. This log of error notifications shall be kept for a minimum of one month.
3. The system shall automatically and manually generate reports of any and all changes to each transit agency's configuration data.
4. The 511 system shall generate a notification and log the event automatically when a change in a transit agency's configuration data is identified.
5. The system shall be able to store log files of the predictions, on an ad-hoc basis, into a format that can be entered into a database and stored in a computer that is not accessible via the Internet. The log files shall be deleted after a configurable period of time. The specific data to be captured during the logging shall include:
   a. Agency name;
   b. Time of day;
   c. Prediction (sent from agency);
   d. Route;
   e. Stop code;

   f. Status field designating whether the 511 System registered a new prediction as either changed or unchanged since the last prediction received.
6. The log shall capture data after it has been categorized by the 511 System.
7. All logged events shall include date and timestamps (to the second).

27. Real-Time Transit System Administrator Notification & Response Requirements (Task II.B)

1. The 511 system shall send an e-mail to the system administrator and log the events within five (5) seconds upon identification of an error in messages or communications.
2. With publish/subscribe, an email shall be sent to the system administrator and the event logged if no data is received by all active transit agencies for a period of five (5) minutes.
3. With publish/subscribe, an email shall be sent to the system administrator and logged if no data is received by at least one transit agency for more than fifteen (15) minutes.
4. With publish/subscribe and request/reply, an email shall be sent to the system administrator and logged if an updated prediction for a stop is not received for more than 60 minutes.
5. With request/reply, the 511 system shall send an e-mail to the system administrator automatically and log the event when requested prediction data from a transit agency is not available after a user-configurable number of request attempts.
6. With request/reply, the 511 system shall send an e-mail to the system administrator and log the event automatically when requested configuration data from a transit agency is not available after a user-configurable number of attempts.
7. With request/reply, the 511 system shall send an e-mail to the system administrator and log the event automatically when requested arrived status data from a transit agency is not available after a user-configurable number of attempts.

28. Real-Time Transit System Backup and Archiving Requirements (Task II.B)

1. The system shall have data archiving capabilities.
2. Nightly backups of the databases for the 511 real-time transit information system shall be performed.
3. The nightly backups shall be completed for the configuration data, arrived status data and all logs, errors and notifications for each night and kept for 90 calendar days at a minimum.

29. Real-Time Transit Expansion Requirements (Task II.B)

1. The system shall be designed such that the system can be expanded to include all the Bay Area transit agencies and all their routes, stops and fleets plus an additional 30% in overall growth of these agencies.
2. The system shall be designed such that it can be expanded to include the collection of data for continuous real-time reporting of transit vehicle position.

DATA DISSEMINATION (PROJECT ELEMENT III)

TRAFFIC & REAL TIME DATA DISSEMINATION (TASKS III A – E)

30. Hardware and Software (Tasks III.A – E)

1. Data dissemination systems shall be secure from malicious attacks and unauthorized access. Utilize industry standard firewall and software protection applications. Hardware specified shall include industry standard security features.
2. Data dissemination servers shall be load-balanced where applicable.
3. Hardware shall be adequately sized (memory, processors, disk space, etc.) to handle estimated demand with minimal impact to users.
4. Hardware and software shall be scalable and shall be specified to allow for future growth with minimal reconfiguration of system.
5. Software patches and upgrades shall be evaluated prior to installation to ensure updates will not adversely affect the functionality of data dissemination systems.

TRAFFIC DATA DISSEMINATION

31. General for all Traffic Data Dissemination channel (Tasks III.A – C & E)

1. Automatically collected Dissemination Data shall be updated every minute.
2. The Contractor is responsible for providing dissemination data in an easy to understand manner. Dissemination information shall include location descriptions sufficient to enable unfamiliar users to understand it and allow them to orient themselves.
3. The Contractor shall ensure that the dissemination of any Caltrans- or CHP-generated information is in compliance with the statewide policy for traveler information distribution.
4. Transportation condition information shall include at least 95% of the available data inputs.
5. The Contractor shall ensure that information dissemination is in compliance with 511's Privacy Policy.
6. So as not to encourage unlawful behavior, the Contractor shall not disseminate traffic speeds as exceeding speed limits.

OPERATE AND MAINTAIN WEB SERVICES (TASK III.A)

32. Web Page General Policies and Standards (Task III.A)

1. Traffic.511.org and my511.org development shall follow generally accepted coding standards for web development.

33. Web Page 511 Portal Relationship (Task III.A)

1. The website should utilize the following as designed/developed by the 511 website design and marketing contractor
   a. style sheets
   b. web design standards
   c. branding
   d. global navigation
   e. navigation flow

f. design templates and layout
g. color schemes

2. Utilize “traffic.511.org” as the traffic web page domain name.
3. Utilize “my511.org” as the MY 511 website domain name.

34. Web Page Accessibility (Task III.A)

1. Web pages shall work on Macintosh and Windows browsers.
2. Web pages shall be maintained to be compatible with various versions of popular web browsers (i.e., Mozilla, etc.) so that majority of the users are captured. Maintain the website to be current with browser version upgrades.
3. Web pages should be designed such that it is usable at a screen resolution of 1024 x 768. and greater.
4. The website should be designed to support Internet connectivity of 56.6kbps and higher.
5. The website shall be designed using no plug-ins, unless sanctioned by MTC.
6. The web pages shall use the standard 256-color palette; maps on the pages may use additional colors.
7. The traffic website design shall meet appropriate conformance levels outlined in the most recent web Content Accessibility Guidelines of the web Accessibility Initiative (WAI) and the Federal Access Board standards under Section 508 of the Rehabilitation Act of 1998.

35. Web Page Data Refreshing (Task III.A)

1. Data Refreshing shall be applicable to all live traffic incident, construction, event, congestion, and driving times data, regardless of display via text, table, or map/graphic.
2. A link or button to manually refresh data shall be available.
3. The traffic web page shall capture user's refresh interval preferences. It shall provide the ability to set refresh interval (e.g. 2 min, 3 min, 5 min, never, etc.). The traffic page shall display text that details the current refresh interval in proximity to data being refreshed.
4. The traffic web page shall ensure the refresh interval does not interfere with a user's accessibility limitations. For instance, the page does not refresh before a screen-reader is able to read all information. To this end, the default refresh interval shall not be faster than 3 minutes.

36. Web Page Personalization/Bookmarking (Task III.A)

1. URLs should contain enough query information so a user can go directly to the information they desire.
2. The traffic web page shall not require users to log in.
3. The traffic web page shall allow users to cycle through three schemes combining different colors.

37. Traffic Web Page Content (Task III.A)

1. The traffic web page shall provide helpful information and links, including but not limited to, “About 511 Traffic,” “511 Driving Times Coverage,” “Carpool Lanes and Lots,” “Bay Bridge Seismic Retrofit Project,” “Local Traffic Information,” and “Traffic Partners”, as well as a method to manage that content.
2. The traffic web page shall provide an “FAQ”. Topics shall be located at the top of page that when selected navigate user to correct question and answer pair, which are located further down on the page. Information shall be ordered logically.
3. The traffic web page shall provide a 511 feedback web form and commuter surveys to capture user’s input, and shall transfer feedback to appropriate location for MTC review.
4. Contact information shall be placed in an obvious location in the traffic web page.
5. The Traffic home page shall provide users with easy access to traffic information. The map and text features shall require not more than one click to access.
6. The Traffic home page shall display overview map with current speed information. The home page will allow users to view full-function traffic map by clicking on the overview map.
7. Data on the home page shall be refreshed at least every five minutes.
8. The Traffic home page shall include links to translate content in Spanish and Chinese, along with a disclaimer about the translation service.
9. The Traffic home page shall include a directory and a link to ‘tell a friend.’
10. When links to partner sites are selected, the traffic web page shall spawn a new browser session and switch focus to partner site.

38. Website Content Management (Task III.A)

1. The Data Dissemination Server shall manage most of the information on the traffic web page dynamically.
2. An online, password-protected content management tool will be provided for elements requiring content management.
3. Managers must be able to readily utilize content management tool.
4. Updating site's content must not cause the traffic web page to go down.

39. Website Data Dissemination Server Downtime/Connection Loss (Task III.A)

1. The traffic website shall monitor last time data was received from Data Dissemination Server.
2. If data has not been received within a predefined interval, the traffic web page shall query the Data Dissemination Server to get an updated dataset.
3. If the Data Dissemination Server does not respond, the traffic web page shall update website traffic data with a message stating that no data is available.
4. In case of connection loss, the site manager shall be notified immediately through a script (pager, email, etc.).
5. Connection loss should be managed on the database server, as this is the last point that data can be monitored before data is transmitted to user.

40. Website System Response Monitoring (Task III.A)

1. System response monitoring shall test and log connectivity to Traffic.511.org and other links/requests to the Data Dissemination Server, if necessary on a scheduled basis.

2. System response monitoring shall test and log response time from web server requests on a scheduled basis.
3. System response monitoring shall set threshold levels for notification.
4. System response monitoring shall automatically notify appropriate people if threshold is met.

41. Website Capacity (Task III.A)

1. The traffic page shall be able to handle up to 1M page views/day.
2. The traffic page shall be able to handle up to 100k simultaneous sessions.
3. Networks shall have high bandwidth connection to accommodate 1,000 simultaneous connections with no more than four seconds of response time.

42. Website Overview of TOMS Interaction (Task III.A)

1. The traffic website shall update automatically collected traffic information and have available for publication on the website immediately upon receipt from the TOMS interface.
2. The traffic website shall update manually collected traffic information and have available for publication on the website immediately upon receipt from the TOMS interface.
3. The traffic website shall utilize location descriptions for traffic information as provided by the TOMS interface.
4. The traffic website shall utilize event and incident descriptions as provided by the TOMS interface.
5. The traffic website shall disseminate and publish data provided by the TOMS interface.

43. General Features Maintenance Standards (Tasks III.A & B)

1. Troubleshoot, identify solution for approval, and begin repair of any problems, issues, malfunctions, etc. of Tier 1 features (and/or the equipment that supports the feature) within no more than 15 minutes of when contractor becomes aware of the problem. Tier 1 features include: Traffic Map (website) and Traffic Conditions (phone)
2. Troubleshoot, identify solution for approval, and begin repair of any problem, issues, malfunctions, etc. of Tier 2 phone and website features (and/or the equipment that supports the feature) within no more than 60 minutes of when contractor becomes aware of the problem. Tier 2 website features include: The SF Gate traffic map; All Incidents/Construction/Events web text; Traffic Breaking News web text; Construction New web text. Tier 2 website and phone features include: Driving Times. Tier 2 phone features include: Transit Agency transfers and recorded information; Help; Real-Time Transit Arrival Times
3. Troubleshoot, identify solution for approval, and begin repair of any problem, issues, malfunctions, etc. of Tier 3 phone and website features (and/or the equipment that supports the feature) within no more than 60 minutes of problem manifestation, unless the repair requires a system restart. Any system restarts required to get Tier 3 features up and running must be deferred until a scheduled maintenance window. Tier 3 features include: All other features

44. Ticker Application (Task III.A.5)

1. When activated, the ticker shall display messages on the 511.org home page, 511 modal sister pages, and my511.org (or a user-selected subset depending on the nature of the incident).
2. The ticker message shall scroll within a box at the top of the page under the 511 header and global navigation bar.
3. The ticker message shall scroll right to left, letter by letter at a readable speed.
4. Messages shall be programmable to run at specified time periods and to automatically stop when the period has expired.
5. Messages shall be able to be modified, deleted or added at any time.
6. Ticker messages shall be created through a password protected web-based user interface, which allows for message creation at any time through remote access.
7. The scrolling message shall be linkable to a target URL.
8. The ticker shall display multiple separate messages, if necessary, and each shall be linkable to distinct URLs.
9. The web-based interface shall include the following options to define: message text, start date/time, end date/time, target URL, link color, and pages to deploy the ticker message
10. The web-based interface shall provide the option to edit, delete, or create a new ticker message.
11. Ticker messages shall be archived by the message text and parameters (e.g., date, target URL, etc.).
12. When updated, the ticker code shall be provided to modal and portal page contractors for implementation on their respective pages.
13. The ticker shall be set up to meet the unique requirements of different 511 pages.

45. Breaking News & Construction (Task III.A.5)

1. Within the “Breaking News & Construction” section of the 511 Traffic home page, the Contractor shall disseminate traffic announcements. Breaking news messages shall display the title of the message, which will be linked to the detailed message on the Breaking News & Construction page. The number of construction messages will be displayed below with a link to the complete text of the messages.
2. The Breaking News & Construction page shall include two sections in the following order: 1) Breaking News and Updates, and 2) Major Construction and Events.
3. Each message will include a message title, date, time stamp, and message text. A link shall be provided to additional information, where appropriate.
4. Messages shall be ordered by time stamp, with the most recently posted/updated message first.
5. Traffic messages will be input manually by TIC Operations staff.

46. Traffic Map with Driving Times (Task III.A.5)

1. The Traffic Map shall use common conventions for the provision of mapped information via the web.
2. The Traffic Map shall open in a new window that does not include the browser navigation and standard toolbars.
3. The Traffic Map shall display a base map with:
   a. interstates

   b. highways
   c. expressways
   d. major arterials
   e. major cities
4. The Traffic Map shall show enough detail to allow users to orient themselves, but not so much detail as to distract from the essential information being presented.
5. The Traffic Map shall clearly display roadways detailed in the Data Dissemination System.
6. The Traffic Map shall be to scale, and a scale bar shall indicate the scale at any zoom.
7. The Traffic Map shall display map tools and navigation features within the section entitled “Features and Tools” including zoom, pan, refresh, re-center.
8. The Traffic Map shall display a selectable information cursor within the section entitled “Features and Tools.”
9. The Traffic Map shall display a button to generate a driving time within the section entitled “Features and Tools.”
10. All map legends shall be readily accessible.
11. The map shall include a map navigator, which is an overview map showing the location within the Bay Area of the currently-displayed traffic map. The user shall be able to hide the overview map.
12. The traffic web page shall display the date and time of the last refresh for currently displayed real-time traffic information.
13. The Traffic Map shall display real-time traffic information only if it has been updated within a configurable time period. If the data feed to the traffic map is disrupted or the information is stale or otherwise inaccurate, the traffic map shall color freeways grey rather than showing colors indicating traffic speeds.
14. The Traffic Map shall display current speeds for links based on speed range by color-coding the links by their speed and providing a color-coded “Traffic Congestion” legend. Speed shall be separated into 3-4 color-coded segments. The traffic web page shall use colors that clearly denote speed ranges (e.g. red, yellow, green, black) as well as “no data” (gray) and “closed” (magenta). To meet accessibility requirements, the traffic website shall provide selectable alternate color schemes. The user shall be able to hide the legend.
15. The Traffic Map shall not code traffic speed by weight (thickness).
16. If HOV data is available, the Traffic Map shall display data separate from, or in contrast to, information on general-purpose lanes.
17. The following types of information shall appear on the traffic map as icons, and shall be able to be toggled on/off in the “Show/Hide” legend:
    a. Incidents
    b. Special events
    c. Construction locations
    d. Locations of traffic cameras
18. The following other items shall be able to be toggled on/off in the “Show/Hide” legend:
    a. Traffic
    b. Base Map

19. The Traffic Maps (and web page, in general) shall use commonly accepted symbols for traffic information, special events, and road construction. These symbols should be taken from a standards manual or, if such does not provide needed symbols, from those used commonly on other current traffic sites.
20. Icons/links for an incident, special event, construction location, or camera location, shall appear on the map. When a user clicks on an icon/link, the relevant data shall appear in a section on the same page, not a separate window.
21. When a user clicks on a camera icon/link, a live video link and the camera location/direction shall appear in the "Information Detail" section. A link to a video disclaimer shall also appear and general roadway information shall also appear underneath. If a user clicks on the live video link, the camera shall open in the computer's media player.
22. If image data from the camera is unavailable, the traffic web page shall display an appropriate message.
23. The Traffic Map shall refresh according to the user's refresh setting.
24. The Traffic Map shall display "Features Help" and "Map Tools Help" legends that provide explanation of the navigations tools. When a map element has been selected, an "Information Detail" section shall replace the help section.
25. The Traffic Map shall display information appropriate to a user action in a section entitled "Information Detail."
26. When a user selects an incident icon on the map, the Information Detail section shall display and populate the following fields:
    a. Incident
    b. Advice
    c. Estimated duration
    d. Last updated
27. When a user selects an event icon on the map, the Information Detail section shall display and populate the following fields:
    a. Event
    b. On street
    c. From
    d. To
    e. Last updated
28. When a user selects a construction icon on the map, the Information Detail section shall display and populate the following fields:
    a. Construction
    b. Advice
    c. On street
    d. Start time
    e. Estimated duration
    f. Last updated

29. When a user selects an area of roadway or any of the icons on the map, the Information Detail section shall display and populate the following fields (this information is in addition to any information associated with the icon):
    a. Route
    b. From
    c. To
    d. City
    e. Speed limit
    f. Traffic speed
30. When a user selects the driving time button with the "Features and Tools" section, the following activities will occur as part of calculation/presentation of the driving times estimate:
    a. Blue dots will appear on the map for the user to select as a starting point.
    b. When the user selects a starting point, the remaining dots will turn pink for the user to choose an ending point.
    c. When the user selects an ending point, the map will display a colored line over the default route (i.e., shortest route) between the two points.
    d. The information detail section will display the starting and ending point, the default trip, and all alternate trips.
    e. Each trip will include the current driving time and the trip length.
    f. Clicking on an alternate trip will cause the traffic map to redraw the trip route on the map.
    g. A user can select a link to see more details on the trips, which includes the current driving time, typical driving time, and trip length for each trip. In addition, the user shall be able to view in a tabular format, each road in the trip, along with minimum speed, average speed, maximum speed, and typical speed for each road segment.
    h. The user shall be able to select a link to close the driving time calculation and return to the traffic data display on the map.

47. Traffic Information (Text Version) (Task III.A.5)

1. All traffic information displayed on maps shall be functionally available in text format.
2. The Traffic Information (Text Version) page shall display a table, "Current Traffic Information Summary" of all incidents, events, and construction. The page shall also include links to go to individual tables for each of these elements.
3. The page shall include a link to a list of cameras to view.
4. The table shall include the following fields:
    a. Type
    b. Route
    c. Start time
    d. Estimated duration
    e. Description

5. The incident/event/construction description shall include a link to a table displaying more detail, including the route, full description, start time, estimated duration, advice, report status, category, and last updated time.
6. The traffic information pages shall refresh the display of an incident list and detail, event list and detail, and construction list and detail according to user settings.
7. The 511 traffic information tables (traffic info summary, incidents, events, and construction) shall allow for ascending and descending sorting of the rows based on each attribute/column contained in the table.
8. The traffic web page shall display the date and time of the last update for currently displayed incidents, special events, construction locations, and cameras.

48. Driving Times (Text Version) (Task III.A.5)

1. All driving times information displayed on maps shall be functionally available in text format.
2. The Driving Times (Text Version) pages shall allow a user to select an origin and destination, which includes a city and intersection pair. The page shall display pre-defined list of cities and intersections.
3. The driving times results page shall present multiple possible trips between those points. The trips shall be ordered with the most direct (shortest) route first.
4. The results page shall present the current driving time, typical driving time, and trip length for each trip.
5. The results page shall present, in a tabular format, each road in the trip, along with minimum speed, average speed, maximum speed, and typical speed for each road segment.
6. The setup and results pages shall include links to related traffic information (traffic info summary, incidents, events, construction, cameras) and Predict-a-Trip, and a link to run a new driving times calculation.
7. Driving times data must accurately and reliably reflect data as reported from Data dissemination server.

49. Popular Driving Times (Task III.A.5)

1. The 511 Traffic home page shall display driving times for popular driving times, as defined by MTC.
2. Each driving time shall display a corridor name, a starting and ending point (city/highway/hotspot), the current driving time, and the typical driving time.
3. The list of popular driving times will change for and be specific to the morning and evening commute.
4. The Popular Driving Times feature shall display a button to calculate a driving time.

50. Historical Driving Times (Predict-A-Trip) (Task III.A.5)

1. The historical data application shall provide the ability to select a day of the week and time of day for historical data views in text-based driving times details.
2. The Predict-a-Trip feature shall be accessible via the 511 Traffic page navigation menus.
3. All information presented by Predict-a-Trip shall be presented in a manner that is considered compliant with applicable Section 508 guidelines.

4. Predict-a-Trip shall interface with the ESRI ArcIMS and ArcSDE products, as needed, to create maps and obtain geo-referenced historical data.
5. Predict-a-Trip shall obtain all historical information via the Historical Data Import.
6. The historical data shall be available via the Historical Data Import on a configurable periodic basis (defaults to daily).
7. The historical data shall be provided via the Historical Data Import using standards-based communication protocols.
8. The historical data shall be provided via the Historical Data Import using a defined data format.
9. Predict-a-Trip shall provide historical driving times for the Popular Driving Times displayed on the traffic home page based on current day of week and time of day.
10. Predict-a-Trip shall provide historical driving times on the map-based driving times results based on current day of week and time of day.
11. Predict-a-Trip shall provide historical driving times on the text-based driving times results pages based on current day of week and time of day.
12. Predict-a-Trip shall provide the ability to select the day of week and time of day for viewing historical data in the text-based driving times details.
13. Predict-a-Trip shall provide historical traffic congestion (speeds) via the text-based driving times results page along user selected driving times routes based on current day of week and time of day.
14. Predict-a-Trip shall provide the ability to select the day of week and time of day for all historical traffic congestion (speeds) views.
15. Predict-a-Trip performance shall be monitored in a manner similar to that used to monitor performance of the existing 511 Traffic website components.
16. The historical data shall be divided into seven categories including:
    a. Thanksgiving
    b. Holidays
    c. Sunday
    d. Monday
    e. Mid-week
    f. Friday
    g. Saturday
17. The historical data shall include average speed for each defined link in 15-minute slots starting from midnight.
18. The historical data shall include average travel time for each defined link in 15-minutes slots starting from midnight.
19. The Predict-a-Trip database shall be sized to support the additional historical data for each link.
20. Predict-a-Trip shall operate with little or no human intervention.
21. Predict-a-Trip shall operate within the current 511 Traffic page system hardware architecture.
22. Predict-a-Trip shall utilize existing Microsoft SQL servers for database management functions.

23. The Historical Data Import shall be functional within the current 511 Traffic page communications network (e.g. firewalls, IP addresses, and other network hardware and configuration elements).
24. Predict-a-Trip reliability shall be the same as the overall reliability of the 511 Traffic page.
25. The features of Predict-a-Trip shall be available as long as adequate historical data has been obtained via the Historical Data Import.
26. With the exception of the map-based access, the features of Predict-a-Trip shall be available when no real-time data is available on the 511 Traffic website.
27. Scheduled maintenance for Predict-a-Trip shall require human intervention.
28. Scheduled maintenance for Predict-a-Trip shall only occur during pre-defined maintenance periods.

51. MY 511 Web - User Interface (Task III.A.5)

1. All information presented by MY 511 shall be presented in a manner that is considered compliant with applicable Section 508 guidelines.
2. MY 511 shall be accessible through www.my511.org.
3. MY 511 shall have a main welcome page that represents the launching point for MY 511 services.
4. MY 511 shall have web pages allowing users to register and log in to the MY 511 service.
5. MY 511 shall have web pages where users can modify applicable personal preferences.
6. MY 511 shall have web pages allowing users to view personalized traffic information.
7. MY 511 shall have web pages allowing users to view personalized transit information.
8. MY 511 shall have web pages allowing users to obtain answers to frequently asked questions.
9. MY 511 shall have web pages allowing users to obtain information about the MY 511 services provided on the phone and the web.
10. MY 511 shall have web pages allowing users to obtain information regarding the privacy policies associated with user-provided personally identifying information.

52. MY 511 Web - Software Interfaces (Task III.A.5)

1. MY 511 shall interface with Microsoft SQL Server for the provision of required database functionality.
2. MY 511 shall interface with web site monitoring software for the provision of site monitoring and alerting.
3. MY 511 shall provide appropriate user account information to the 511 phone system whenever this information is created, modified, or deleted.
4. MY 511 shall provide preference information to the 511 phone system as required to support the MY 511 phone features.
5. MY 511 shall provide driving time route and traffic condition preferences to the 511 phone system whenever this information is created, modified, or deleted.
6. MY 511 shall provide transit departure time preferences to the 511 phone system whenever this information is created, modified, or deleted.

7. MY 511 shall provide user account verification services using a specified software interface.
8. MY 511 shall provide software services for identifying currently logged in MY 511 users using a specified software interface.
9. The 511 Traffic page shall provide software services to support the creation and modification of saved map views using a specified software interface.
10. The 511 Traffic page shall provide software services to support the display of user selected map views on the MY 511 personalized home page using a specified software interface.
11. The 511 Traffic page shall provide software services to support the creation and modification of personalized driving times routes using a specified software interface.
12. The 511 Traffic page shall provide software services to support the display of driving time information and current traffic conditions associated with personalized driving times on the MY 511 personalized home page using a specified software interface.

53. MY 511 Web - Communications Interfaces (Task III.A.5)

1. MY 511 shall communicate with other systems using standards-based communication protocols.
2. MY 511 shall communicate with other systems using defined data formats.

54. MY 511 Web – User Experience (Task III.A.5)

1. MY 511 shall allow a user to log in using a previously registered user name and password.
2. MY 511 shall allow a user to request to be ‘remembered’ on the computer they are currently using to access MY 511 features.
3. MY 511 shall automatically log in a user that has been ‘remembered’ on the computer currently being used to access MY 511 features.
4. MY 511 shall allow a user to log off the MY 511 services.
5. MY 511 shall no longer ‘remember’ a user once they log off the MY 511 service.
6. MY 511 shall allow a user to log in as a different user in the case where a previous user has not logged out.
7. MY 511 shall allow a new user to register for the MY 511 service.
8. MY 511 shall allow a user to enter their name as part of the registration process.
9. MY 511 shall allow a user to optionally enter their city name and zip code as part of the registration process.
10. MY 511 shall allow the user to enter their primary telephone number as part of the registration process.
11. MY 511 shall allow the user to enter a secondary telephone number as part of the registration process.
12. MY 511 shall allow the user to enter a tertiary telephone number as part of the registration process.
13. MY 511 shall allow the user to enter their email address as part of the registration process.
14. Email addresses shall be unique within MY 511.
15. MY 511 shall prompt users to re-enter their email address if it is not unique.

16. MY 511 shall allow the user to select their username as part of the registration process.
17. Usernames shall be unique within MY 511.
18. MY 511 shall prompt users to re-enter their username if it is not unique.
19. MY 511 shall provide a user selectable option as part of the registration process to indicate willingness to be kept informed of news from 511 via email. A spreadsheet of these registrants shall be provided to the 511 Marketing Contractor on a weekly basis.
20. MY 511 shall validate users by sending a validation email to the email address used by the user during registration.
21. MY 511 shall provide a link in the validation email that the user uses to complete the final step of registration validation.
22. MY 511 shall be able to respond to validation requests from users in order to complete the final step of registration validation.
23. Upon receipt of a validation request, MY 511 shall verify the user account indicated in the validation email response.
24. MY 511 shall activate verified accounts.
25. MY 511 shall send appropriate user information for activated accounts to the 511 phone system
26. MY 511 shall invalidate user accounts after a configurable time elapses with no validation request received.
27. MY 511 shall delete all information associated with an invalidated account.
28. MY 511 shall display a personalized ‘home’ page to a user upon successful login to the MY 511 service.
29. The personalized ‘home’ pages shall include personalized views for driving times.
30. The personalized ‘home’ page shall include personalized views for transit departures.
31. The personalized ‘home’ page shall include personalized views for traffic conditions.
32. The personalized ‘home’ page shall include personalized views of traffic cameras.
33. The personalized ‘home’ page shall include message alert features such as the 511.org ticker.
34. The personalized ‘home’ page shall include areas where promotional information may be displayed (promo boxes).
35. The personalized ‘home’ page shall include links to configuration pages including:
    a. MY 511 account information
    b. Map views
    c. Driving times and traffic conditions
    d. Cameras (desired)
    e. Traffic information refresh rates
    f. Transit departure information
    g. Transit departure information refresh rates
    h. Traffic and transit alerts
36. MY 511 shall allow a user to modify their account information.
37. MY 511 shall allow a user to opt-out of the service (this will essentially delete the user from the system)
38. MY 511 shall allow a user to configure the default refresh rate for the traffic website dynamic pages.

39. MY 511 shall allow a user to define and save up to six personalized driving times routes by defining a starting and ending point from a list of predefined trip names.
40. MY 511 shall allow a user to name each personalized driving time route from a list of predefined trip names.
41. MY 511 shall allow a user to select a preferred default path for driving time routes with more than one defined path. This path shall be provided first on my511.org and MY 511 phone.
42. MY 511 shall allow a user to choose their traffic trip origin/destination from a list of hotspots or by city and intersection.
43.
44. MY 511 shall allow the user to select up to six cameras for inclusion on their personalized 'home' page.
45. MY 511 shall allow a user to nickname each personalized camera selection, while still displaying the camera location name.
46. MY 511 shall allow the user to define and save up to six transit routes by selecting from stops and to stops for each route.
47. MY 511 shall allow the user to specify the transit agency providing the transit service from a pre-defined list of transit agencies.
48. MY 511 shall allow the user to select the from-stops and to-stops for each route.
49. MY 511 shall allow the user to specify default routes in cases where multiple routes are serviced by the selected stops. This route shall be provided first on my511.org and MY 511 phone.
50. MY 511 shall allow the user to name each transit route from a list of pre-defined names.
51.
52. MY 511 shall allow the user to name and define up to six different map views (setting a specific pan location and zoom level, turning features on/off, etc.)
53. MY 511 shall allow a user to recover a forgotten username.
54. MY 511 shall allow a user to recover a forgotten password.
55. MY 511 shall require the user to know the username in order to recover the associated password.
56. MY 511 shall verify the specified username using the MY 511 registration database.
57. MY 511 shall notify the user if the specified username does not exist in the MY 511 registration database.
58. MY 511 shall send password recovery information when the user account is verified using the MY 511 registration database.
59. MY 511 shall indicate to the user that a password recovery email has been sent to the email address associated with the verified user account.
60. MY 511 shall require the user to know the email address in order to recover the associated username.
61. MY 511 shall verify the specified email address using the MY 511 registration database.
62. MY 511 shall notify the user if the specified email address does not exist in the MY 511 registration database.
63. MY 511 shall send username recovery information when the user account is verified using the MY 511 registration database.
64. MY 511 shall indicate to the user that a username recovery email has been sent to the email address associated with the verified user account.

65. MY 511 shall send all username and password recovery requests via an email directed to the email account associated with the user account for which the username or password is being recovered.
66. MY 511 shall allow the user to submit a user comment or suggestion.
67. MY 511 shall forward all comments and suggestions to a specified email recipient.
68. MY 511 shall display a 'thank you' message to the user along with a link to continue.
69. MY 511 shall allow an authorized user to log in as a MY 511 system administrator
70. MY 511 shall allow an authorized MY 511 system administrator to configure the inactivity check frequency.
71. MY 511 shall allow an authorized MY 511 system administrator to configure the alert notification check frequency.
72. MY 511 shall allow an authorized MY 511 system administrator to configure the account inactivity notification period.
73. MY 511 shall allow an authorized MY 511 system administrator to configure the inactive account deletion grace period.
74. MY 511 shall allow a currently logged in MY 511 system administrator to log off as a MY 511 system administrator.
75. MY 511 shall periodically check MY 511 user accounts for inactivity based on the configured inactivity check frequency.
76. If the account has been inactive as long or longer than the inactivity alert notification period and an inactivity notification has not already been sent, MY 511 shall send an email notification to users of inactive accounts indicating the account is inactive and is scheduled for removal from the system in [inactive account deletion period] days.
77. MY 511 shall set a flag in the user registration database when an inactivity email is sent to the email address associated with an inactive account.
78. MY 511 shall reset a flag in the user registration database indicating an inactivity email has been sent when the inactive account becomes active again.
79. MY 511 shall remove accounts that have been sent an inactivity alert and have remained inactive for the configured inactive account deletion grace period.
80. MY 511 shall send an email to the email address of a removed account indicating the account has been deleted from the MY 511 system.
81. MY 511 shall allow a user to register for a Traffic Severity Alert, Traffic Status Update, and Transit Status Update.
82. When registering for a Traffic Severity alert, a user shall be able to choose her trip, a time range, the days of the week, and the severity threshold (i.e., percentage change over typical/normal conditions).
83. When registering for a Traffic or Transit Status Update, a user shall be able to choose his trip, the time of day, and days of the week to receive the alert.
84. MY 511 shall allow a user to add/edit/delete any alert at any time.
85. MY 511 shall display an icon on the users' personalized home page to indicate trips that have alerts defined.
86. MY 511 shall allow the user to identify their preferred e-mail delivery format (html or text).
87. MY 511 shall allow the user to indicate their preferred medium for receiving alerts (e-mail, text message, or both).

88. MY 511 shall allow the user to choose one of their three registered phone numbers for each alert.
89. MY 511 shall require users to verify that they are aware that their cell phone provider may charge them for text messages.
90. MY 511 shall allow a user to deactivate an alert on the Traffic Preferences page without deleting the alert.
91. MY 511 shall disseminate messages appropriate to the delivery medium (e.g., text e-mails will show complete links, text messages will receive an abbreviated alert).
92. MY 511 shall periodically check for alerts to be sent to users based on the configured alert notification check frequency.

55. MY 511 Web – Performance (Task III.A.5)

1. MY 511 performance shall be monitored in a manner similar to that used to monitor performance of the 511 traffic web page components.
2. MY 511 shall provide information as accurate and reliable as the data source.
3. The features of MY 511 shall be available as long as adequate current data is available.

56. MY 511 Web - Logical Database (Task III.A.5)

1. MY 511 user registration information shall be stored within the MY 511 user database.
2. MY 511 user preferences shall be stored within the MY 511 user database.

57. MY 511 Web - Design Constraints (Task III.A.5)

1. MY 511 shall operate with little or no human intervention.
2. MY 511 shall utilize Microsoft SQL servers for database management functions.
3. MY 511 shall be able to communicate with the current 511 communications networks (e.g. firewalls, IP addresses, and other network hardware and configuration elements).
4. MY 511 system outages and failures shall not affect the operations of the other elements of the 511 system.

58. MY 511 Web – Security (Task III.A.5)

1. MY 511 shall store all user data in a secure manner.
2. MY 511 services shall be available only to registered MY 511 users.

59. MY 511 Web – Maintainability (Task III.A.5)

1. Scheduled maintenance for MY 511 shall require human intervention.
2. Scheduled maintenance for MY 511 shall only occur during pre-defined maintenance periods.
3. The Contractor shall provide a content management system to allow for the maintenance of promo boxes on users' personalized home pages.

511 PHONE SERVICE (TASK III.B)

60. Phone Service General (Task III.B)

1. The Contractor shall disseminate multi-modal traveler information over the 511 phone service. Information shall include location descriptions sufficient to enable unfamiliar users to understand it and allow them to orient themselves.
2. The 511 phone service shall support at least 244 simultaneous calls.
3. Voice recognition shall consistently be at least 70%.
4. Contractor shall develop a written plan for monitoring communication link quality on an ongoing basis and leveraging internal and/or external tools to study and diagnose communication quality issues. Ideally, ongoing testing should include or result in a mean opinion score (MOS) reflecting standardized call quality algorithms to be reported to MTC on a monthly basis.
5. The Contractor shall conduct regular Nuance tuning exercises at least annually and after implementation of new features or as requested by MTC to identify opportunities for further improving recognition of voice commands. Contractor shall develop recommendations and implement changes in a timely manner.
6. Contractor shall maintain agreements with Nuance to fully leverage capabilities relative to SNMP traps facilitating remote monitoring and management.
7. The Contractor shall maintain access to 511 from all landline carriers, cell phone carriers and pay phones in the nine-county Bay Area. The Contractor shall also maintain access through the 510-817-1717 number; Customers who dial 510-817-1717 will be automatically be re-routed to 511.
8. The Contractor shall maintain a main menu, with additional hidden ‘shortcut’ options available at the main menu.
9. The Contractor shall also maintain a Public Transportation menu and Traffic menu with multiple submenus within each.
10. The Contractor shall provide direct connections through the 511 telephone system to:
    a. All Bay Area transit and paratransit operators Select ridesharing and bicycling services as directed by MTC, FasTrak® call center, TransLink® call center, Freeway Aid call center, Sacramento 511, and others as directed by MTC (e.g., airport information lines, taxi companies).
11. The Contractor shall disseminate key announcements and incident messages via floodgate messages at the beginning of each menu, when appropriate. The Contractor shall also disseminate information on major transit incidents and delays over the 511 system via floodgates.
12. The Contractor shall provide help for callers during the call through a series of automated help prompts at each menu. The help shall provide information on how to use the system, basic principles of the type of information provided by and though the system, and assistance in navigating the menus. The help message will be specific to the caller’s current location within the menu. Callers will be able to access the help message by saying ‘help’ or ‘what are my choices?’
13. The Contractor shall ensure that menus are interruptible. The Contractor will also ensure that floodgates can be programmed to be either interruptible or non-interruptible.

14. The Contractor shall maintain universal navigation using standard voice and touch-tone commands, including but not limited to ‘cancel,’ ‘main menu,’ ‘stop,’ ‘go back,’ ‘repeat,’ ‘goodbye,’ and ‘0,’ ‘*’ or ‘**.’
15. At any time, the caller can say “Main Menu” to return to the Main Menu.
16. After a transaction is completed, such as playing a recorded message, the caller will be returned to the menu from which they came (except when they are transferred to an operator or taken to the survey feature).
17. Contractor shall maintain ADA-compliant solutions to ensure access to 511, including access via 711 through a TTY and a DTMF (touch-tone) backup system. Touch-tones menus should be available at every menu when a caller presses zero, and should be ordered in the order which voice prompts are played.
18. The Contractor shall maintain the customer comment feature on the phone, which is available by pressing 7-7, and allows the customer to record a comment.
19. The Contractor shall conduct recording sessions as needed (i.e. when new features are added or approximately every six months to accommodate system updates). Recordings shall be made by the existing 511 phone voice talent or entirely re-recorded to ensure one consistent voice. The Contractor shall maintain The 511 Manager, a database and directory of current and archived recordings. Recordings shall be implemented on the 511 phone system in a timely manner after recording sessions (typically no more than two weeks thereafter).
20. The Contractor shall proactively monitor typical and extraordinary call capacity needs and make recommendations to MTC staff about options for ensuring that the highest possible number of incoming calls reaches the 511 system.

61. NVP Lite (Task III.B)

1. The Contractor shall maintain 511’s failover backup menu system, NVP Lite.
2. When the telephony servers are off-line, NVP Lite shall answer incoming calls.
3. NVP Lite shall present callers with options for call transfers to major transit agencies.
4. Upon misrecognitions of user commands, the system shall inform users that the failover backup system has been activated.

62. MY 511 Phone (Task III.B.4)

1. To use MY 511 on the phone, callers shall be able to register on my511.org.
2. MY 511 shall support the identification of 1 primary and up to 2 alternate telephone numbers for a user. MY 511 shall immediately recognize a caller if they are calling from one of their three registered phone numbers and the ANI is available.
3. If a caller is recognized via their registered ANI, the 511 main menu shall not play. Instead, the MY 511 menu shall play and will immediately ask a caller to say their trip name.
4. MY 511 shall recognize a user even when the ANI is unrecognizable. If an ANI is not available, callers will hear the standard 511 main menu and can then say “MY 511” and input their 10-digit phone number.
5. If a caller’s phone number is not recognized and they say “MY 511,” they can then say, “help” to hear a description about the service.

6. If a caller's number is not recognized after entering it, they will be prompted to re-enter it. If it is still not recognized after the caller tries a second time, the system will instruct the caller to register at 511.org and will then return the caller to the main menu.
7. When a caller requests their trip, MY 511 plays their default route (as registered on my511.org) first.
8. When a caller has a same-named traffic and transit trip, MY 511 plays their preferred trip (traffic or transit, as registered on my511.org) first.
9. After hearing trip information, MY 511 returns the caller to the MY 511 menu to say another trip.
10. MY 511 users shall be able to access the Main Menu from a MY 511 state by saying "main menu."
11. MY 511 users shall be able to use standard 511 commands (e.g., "stop," "help," "repeat").

63. Driving Times (Task III.B.4)

1. The Contractor shall disseminate driving time predictions through the 511 Driving Times feature, which provides real-time driving times based on a user-selected starting and ending point, including associated incidents and slowdowns.
2. If a caller requests Driving Times from the Main Menu or Traffic Menu, they will be asked for a starting point, which can be a city, bridge, or hotspot.
3. After they have said their starting point, 511 will repeat the caller's choice and ask for their confirmation.
4. When the starting point has been confirmed, 511 will ask for the caller's ending point.
5. Starting/ending points can be cities or hot spots.
6. If the city given is one of the designated "megacities", the caller will be asked if they would like to narrow down the report by giving one of the refine points. Callers can use these refine points as hot spots directly as well.
7. If the caller doesn't know their starting or ending point, they can say, "What are my choices." 511 will provide a list of cities, bridges, or hotspots. If they choose "cities," 511 will ask the caller to narrow the list by regions first.
8. During driving times playback, if there are multiple routes, the caller will be told they can "say 'skip route' or press 2 at any time."
9. 511 will play the driving time followed by the route. If there are multiple incidents, callers will be told they can "say 'next incident' or press 2 at any time." After the route, 511 will play all incidents and slowdowns.

64. Traffic Conditions (Task III.B.4)

1. The Contractor shall disseminate traffic information through the Traffic Conditions feature.
2. If a caller requests "Traffic Conditions" from the Main Menu or Traffic Menu, they will be asked for the name of a major highway, bridge, city or "hot spot".
3. A caller can also say "what are my choices" for assistance in making a selection, including hearing complete lists of available options.

4. Once the highway/city/bridge/"hot spot" has been determined, 511 will retrieve the top incidents for this area and play them for the caller. These incidents will be constructed from pre-recorded speech, and will follow a set pattern.
5. Traffic conditions information shall include accurate event or incident descriptions, including an incident description, time stamp, speed range, location, and slowdown extent. Traffic Conditions shall include a maximum of five incidents, not including floodgates, with the option to hear additional incidents.
6. Each incident will be played in order without any input needed from the caller.
7. After all incidents have been played, the caller can choose to repeat the incidents, get another traffic report for a different location, or get a driving time.
8. Traffic incidents will include positive incidents as well, such as "traffic is averaging 65 MPH". Traffic incidents will avoid reporting simply "There are no incidents at this time" without any additional information.
9. Callers can say "next incident" to skip ahead.

65. Paratransit (Task III.B.4)

1. If the caller requests "Paratransit" from the Main Menu or Public Transportation, they will be asked for the name of the paratransit agency.
2. When the caller names an agency, they will then be taken the appropriate menu for that agency or transferred directly to the agency after hearing a short transfer message.
3. If the caller doesn't know their agency, they will be asked for the city or county. Once a city or county has been chosen, the caller will be transferred to the appropriate operator or menu for the city or county chosen. A message will be played indicating which agency they'll be going to.

66. Transit Agencies (Task III.B.4)

1. If a caller requests Transit Agencies from the Main Menu, they will be asked to say the name of the Transit agency.
2. When the caller names an agency, they will either be transferred after hearing a short transfer message, or asked to choose what type of information they would like if the agency has a multi-option menu.
3. If the caller doesn't know their agency, they will then be asked what city they will be traveling from. If there is only one transit agency for that city, they will be taken to that agency's menu. If there are multiple transit agencies for that city, they will be given a list of the possible agencies to choose from. If they still do not know, they will be taken to the most common possibility. When the caller is taken to the agency menu automatically, a prompt will be played telling them which agency menu they will be transferred to.

67. Rideshare/Carpool/Vanpool (Task III.B.4)

1. If the caller selects Ridesharing from the Main Menu, they will be asked if they'd like information for all counties except Napa and Solano Counties, or for information for Napa and Solano Counties.
2. If the caller chooses the first option, they will be transferred to the 511 Rideshare operator.

3. If the caller chooses the second option, they will be transferred to Solano Napa Commuter Information (SNCI).

68. Commuter Incentives (Task III.B.4)

1. If the caller selects Commuter Incentives from the Public Transportation Menu, they will be asked if they'd like information for all counties except Napa and Solano Counties, or for information for Napa and Solano Counties.
2. If the caller chooses the first option, they will be transferred to the 511 Rideshare operator, who provides commuter incentives information.
3. If the caller chooses the second option, they will be transferred to Solano Napa Commuter Information (SNCI).

69. Bicycling Information (Task III.B.4)

1. If the caller selects Bicycling from the Main Menu, they will be asked if they'd like information for all counties except Napa and Solano Counties, or for information for Napa and Solano Counties.
2. If the caller chooses the first option, they will be transferred to the 511 Rideshare operator, who provides bicycling information.
3. If the caller chooses the second option, they will be transferred to Solano Napa Commuter Information (SNCI).

70. Airport Information (Task III.B.4)

1. If the caller chooses "Airport Information" from the Main Menu, Traffic Menu, or Public Transportation Menu, they will first be asked for an airport. Possible airports include San Francisco International, Oakland International, San Jose International, and Sacramento International.
2. For all airports except Sacramento, once an airport has been chosen, callers will be asked if they would like traffic conditions, parking rates, or ground and public transportation. In addition, if information is available, Oakland airport menu will play a floodgate for parking spaces available.
3. Choosing traffic conditions information will play the appropriate list of incidents associated with the airport. 511 will respond as if the caller had chosen the Traffic Conditions feature and named an airport (such as SFO) as the location.
4. Choosing either of the other options or selecting Sacramento will transfer to the caller to the 511 Rideshare program, who provides airport information.

71. Survey (Task III.B.4)

1. After the caller has completed a major transaction, they can be asked to participate in a survey. These major transactions include only the following:
2. Successfully requesting Traffic Conditions information
3. Successfully requesting Driving Times information
4. Successfully requesting Departure Times information
5. Successfully requesting pre-recorded Public Transportation information.
6. If the survey feature has been turned on at one of these specified points, callers will be asked to participate. If they answer in the affirmative, then they can be asked one or more questions of the following type:

a. yes/no
b. multiple choice
c. a scale (such as “very satisfied”, “not very satisfied”,… etc.)

7. The number of questions, the questions themselves, and the possible answers, can be changed dynamically, with no speech application code changes.
8. As an alternative, a supplemental survey feature is available that asks if callers would participate in a survey administered by an outside call center. During operator hours, a floodgate will be played telling callers about the survey, and that they will hear a message about it later in their call.
9. If the caller has completed a major transaction (described above), they will be asked if they wish to participate in the survey. If they say yes, they will be transferred to the survey call center.
10. In addition, a floodgate can tell callers they can take the survey if they'd like by pressing 9 9 at any time. If the caller presses 9 9, they will be transferred to the call center.
11. During non-operator hours, if the caller presses 9 9, they will hear a message playing the operator hours, and will not be transferred.

MAINTAIN AND DISSEMINATE TRAFFIC DATA FEEDS (TASK III.C)

72. TravInfo® Open Messaging Service (TOMS) (Task III.C.2)

1. TOMS will output link, speed and event data that is consistent with the data received from the originating source.
2. Incidents originating from manual entry by TIC Operators into EDFS will be seen from TOMS within 5 minutes of the event being entered.
3. Link and speed data will be available from TOMS with 1 minute of being processed.
4. The Contractor is responsible for developing a general non-proprietary interface that can be used by a variety of partners to access the data.
5. ISPs will use custom applications which incorporates the JMS client (COTS application) to interact with TOMS
6. The Contractor shall make all fused and original data that is not restricted by privacy constraints available to partner agencies via ITS standards-based interfaces.
7. The Contractor shall maintain the ability to disseminate transit incident information via the TOMS.

REAL-TIME TRANSIT DATA DISSEMINATION (APPLIES TO TASKS III.A, D & E)

73. Announcement Requirements (Task III.A)

1. An announcement shall be presented to 511 users if no prediction data is available for a specific stop. This announcement shall be presented when the user specifically requests prediction data for a specific stop.

74. Hub Sign Requirements (Task III.D)

1. Regional real-time transit signs will provide, at a minimum, the following content: a) Agency name or icon, b) Route code, c) Route name with direction, and d) Estimated departure time

2. Use page alternation to display content that does not fit on a single page. When displaying multiple pages, the amount of time each page is displayed will be configurable. The bottom of the first page will display "1 of x" with each successive page adding 1 to the first number until the last page displays, "x of x".
3. Predictions will be listed alphabetically by agency name, then by route name in ascending order with letter-named routes listed before numbers (or if no number or letter exists, alphabetically by route name).
4. Each sign or combination of signs must be capable of showing no more than three predictions per route not to exceed a configurable time limit. If the data feed is only providing one or two predictions per route, the sign will display those predictions.
5. Once the prediction is less than two minutes, the regional sign will display "<2".
6. Predictions will be shown in whole minutes.
7. If there are no transit service predictions available for a particular route, the sign shall provide a special message for that route.
8. The station name will be displayed in the header of the web page.
9. If the sign web server encounters a technical error processing the page or there is a communications failure between the sign and the database, the sign will display "NO DATA AVAILABLE". The cause of the failure will be embedded as a hidden field in the sign display for use in debugging and a log and alarm for the system administrator shall be generated.
10. Signs will allow for the keyboard entry of text messages to be displayed instead of the automatic predictions. For messages less than 80 characters, the display font size will be the same as the predictions. If the message is greater than eighty (80) characters but less than 120 characters, the display font size will be reduced to force the message to fit within the space designated for prediction times. Messages greater than 120 characters are not permitted.
11. All regional real-time signs will connect to the Internet to display real-time transit web pages hosted by an MTC web server. The web page residing on the web server will periodically retrieve prediction updates from the system database. The update rate will be adjusted via a configuration parameter.
12. The sign will not display data that has not been updated in the RTT database within a configurable period of time. If no updated data exists for a particular route, a special message will be displayed in place of prediction data.
13. The routes and stops that comprise each transit hub will be stored in the real-time transit database.
14. The number of routes displayed per page will be adjustable via a configuration parameter.
15. The footer message displayed at the bottom of the page will be adjusted via a configurable parameter.
16. Database connection parameters will be stored in a configuration file on the web server.
17. The current time will be displayed in the footer of the web page.
18. The 511 logo will be displayed in the header of the web page.
19. The size of the display will be configurable via a cascading style sheet (CSS) file.

75. SMS and Email Data Dissemination (Task III.E)

1. Disseminate email messages based on user format preferences (i.e., text versus html).

2. Modify messages to be appropriate to the delivery medium (e.g., provide summary information in SMS messages).

OPERATE THE 511 TRAVELER INFORMATION CENTER (TIC) (PROJECT ELEMENT IV)

76. Manual Data Operations (Task IV.A)

1. TIC operators shall collect and enter incident information 24-hours per day, 7 days a week, 365 days per year.
2. TIC operators shall collect and enter detailed incident information along the CHP patrolled segments of the San Francisco Bay Area's Metropolitan Transportation System (MTS) network.
3. TIC staff shall monitor disseminated traffic speeds and override as necessary.
4. TIC operators shall disseminate incident and congestion information on regional routes outside the nine Bay Area counties affecting traffic to and from the Bay Area region from appropriate sources when available.
5. TIC operators shall collect and enter the locations and times of planned events at major venues, construction activities, scheduled delays, and lane closures as often as necessary for the nine Bay Area counties from all available sources including Caltrans, local public agencies, major event organizers, sport organizations, etc.
6. TIC operators shall collect and enter information on major and specified minor incidents from transit operators.
7. During periods of natural disasters, TIC operators shall collect and enter disaster related information available from regional emergency management centers, Caltrans, CHP, and MTC.
8. TIC operators shall enter incident data within one (1) minute of verification of the incident. The verification process must be completed within five (5) minutes of the first received report of the incident 90% of the time. Incidents must be updated within three (3) minutes of confirmation of change of status.
9. TIC operators shall provide accurate freeway and arterial names, interchange or cross street names, and direction of travel when disseminating incident information 98% of dissemination instances.
10. TIC operators shall provide traffic incident information that is the same as the CHP CAD output.
11. Manually collected Dissemination Data shall be posted, enhanced, and withdrawn within three (3) minutes of confirmation of changed circumstances.
12. TIC operators shall support on-going performance monitoring of 511 phone and web systems by conducting structured, daily checks and tests utilizing various test scripts.

77. California Highway Patrol Computer Aided Dispatch (CHP CAD) Operations (Task IV.A)

1. TIC Operators shall collect and enter the incident data from the CHP Media CAD web site according to the SOP.
2. The Contractor, at its expense, in order to comply with CHP requirements, shall provide for California Department of Justice (CDOJ) and Federal Bureau of Investigation (FBI) background checks for any Operations employee assigned to use the California Highway Patrol Media CAD password-protected website, or with regular access to the TMC or TIC

EMERGENCY RESPONSE (PROJECT ELEMENT V)

78. Respond to Emergencies (Task V.A)

1. Provide the following staffing resources at the following locations within the following timeframes of being notified of an emergency that causes full or partial activation of the Caltrans or MTC Emergency Operations Center (EOC) or both EOCs:
   a. Website/applications developer on-site at the TIC within one hour
   b. Project manager on-site at the TIC or MTC offices within two hours
   c. TIC Supervisor on-site at the TIC within one hour
   d. System Administrator n-site at the TIC within one hour
2. Provide sufficient TIC staff to handle information collection and dissemination during the course of an emergency.
3. Provide an on-site website/applications developer, project manager, TIC Supervisor, and sufficient TIC staff to handle information 24 hours a day for the duration of the emergency.
4. Disseminate transportation information related to the emergency through the 511 system within 20 minutes of when the first TIC staff member becomes aware of the emergency.

APPENDIX A-3 SYSTEM COMPONENTS TO OPERATE AND MAINTAIN

The following is a list of the existing system components that the Contractor must operate and maintain until such time as they are replaced or retired through enhancements or on-going system upkeep. Definitions of the system components are provided in *Appendix L, Glossary*.

1. Project Management

- System Reliability Database
- Project Equipment and Software Inventory Database
- ProjectSolve website
- Bugzilla Bug-Tracking Software
- System to track subcontracts and other project agreements
- Phone and website usage tracking tools and reports

2. Traffic Data Collection

- TrafficWatch readers
- TrafficWatch communications system
- Caltrans Data Detection Interface (CDDI) software
- CDDI Analyzer software
- SpeedInfo Data Interface
- Automatic Link Data Fusion (ALDF) software
- Link Data Interpolator (LDI) software
- Interface to use Caltrans cameras
- 511 Travel Time server
- 511 Back-end server
- Smart Corridors Interface
- CHP CAD Interface
- Enhanced Data Fusion System (EDFS)
    - Local Area Network
    - Communications Links
    - Back-up Power Supplies
    - EDFS software systems
    - EDFS database
    - Wide Area Network
    - Browser-based content management system
    - Break-A-Link Tool
- Test-bed and staging servers

3. Traveler Information Center (TIC)

- TIC office equipment and office assets – see the TIC Inventory on

4. Emergency Response

- Website Emergency Abbreviated System (EAS)
- Phone Emergency Abbreviated System (EAS) – Regional Disaster
- Phone Emergency Abbreviated System (EAS) – Sub-Regional Disaster

5. Web Services

- Web Servers
- 511 Back-end Servers
- Voice Interface Servlet
- JMS Servers
- Mapping Software
- Mapping tools
- Test-bed and staging servers

6. Website Features/Functions

- Driving Times
- MY 511
- Customer comment features
- Detour Driving Times
- Historical Driving Times (Predict-A-Trip)
- Website News Ticker
- Test-bed and staging servers

7. 511 Phone System

- Telephony Servers
- Conversation Servers
- Phone Floodgate (phone only)
- 511 Manager
- Nuance Voice Platform Lite (NVP Lite)
- Test-bed and staging servers
-

8. Telephone Features/Functions

- Driving Times
- MY 511
- Customer comment features
- Detour Driving Times
- Travel Alert Phone Menu
- Test-bed and staging servers

9. Data Feeds

- Data Feed to 511 Phone and 511 Website
- Data Feed to ISPs (TOMS)

10. Real-Time Transit Data System

- JMS Server (Prediction data)
- FTP Server (Configuration data)
- Dynamic Transit Data Interface
- Test-bed and staging servers

11. Real-Time sign server

- Real-Time Transit Data Store
- Real-Time Transit Server
- Transit Hub Signage Application
- Web-services data transfer tool (prediction and configuration data)
- Java Messaging System (prediction and configuration data)
- Interface to Real-Time Transit Data Extraction Tools (XML data extraction tools)

APPENDIX A-4 PROJECT DELIVERABLES AND APPROVAL PROCESS

The following table summarizes the deliverables listed throughout the Scope of Work.

Task	Deliverable	Frequency
I.A.1	Five-year strategic plan	March 31, 2010 March 31, 2011 March 31, 2012 March 31, 2014
I.A.2	"Watch list" of new technology provided in a web-based format (e.g., ProjectSolve) that summarizes each technology, its capabilities, its pros and cons, applicability to the project, etc.	Begin list development 7/1/09 Update list as information about technology becomes available and no less frequently than quarterly.
I.A.3	Web-based list of potential project optimizations and enhancements (e.g., maintain list on ProjectSolve)	Begin list development 7/1/09 Update list as new ideas are generated and no less frequently than quarterly.
I.A.4	Annual strategy planning session	February 1, 2010 February 1, 2011 February 1, 2012 February 1, 2013 February 1, 2014
I.A.5	Annual Work Plan	Annually Final YR1: 7/31/09 Draft YR2: 3/31/10 Final YR2: 5/31/10 Draft YR3: 3/31/11 Final YR3: 5/31/11 Draft YR4: 3/31/12 Final YR4: 5/31/12 Draft YR5: 3/31/13 Final YR5: 5/31/13
I.A.6	Configuration Management Plan	Once, by 12/31/09 Update annually
I.B.1	Monthly Invoices	Monthly within 30 days of the end of the billable month
I.B.2	Monthly Progress Reports	Monthly within 30 days of the end of the billable month
I.B.3	Cost to complete enhancements analysis	Quarterly
I.B.4	Local office space	By 9/30/09 and then maintained throughout the contract period.
I.B.5	Emails to the MTC Project Manager about staff privacy policy trainings: schedule, agenda, attendance, etc.	Whenever changes are made to the privacy policy and not less than annually

Task	Deliverable	Frequency
I.B.6	Bi-annual privacy assessment produced by a third party	3/31/11 3/31/13
I.B.7	Project records	Upon request
I.B.8	Updated, maintained ProjectSolve website	Ongoing
I.B.9	Updated project documentation	Within two months of any system change
I.B.10	Updated, maintained bug-tracking software	Ongoing
I.B.11	Annual Work Plan Status tool Annual Work Plan Status report	Tool set up by 9/30/09. Monthly (starting 10/31/09) – part of monthly progress report
I.B.12	Configuration management report	Finalize tool by June 30, 2010 and provide 2x per year with the monthly report.
I.B.13	Equipment/software list	By 9/30/09; Update every six months
I.B.14	Value-added services and/or revenue generated on behalf of the project	Based on approved value-added strategy (Task I.A.1)
I.C.1	Effective project team	On-going
I.C.2	MTC – Contractor meetings	Bi-weekly
I.C.3	Change Control Board meeting participation and minutes	Annual strategy meetings Additional meetings as needed
I.C.4	Documents to support MTC's information sharing efforts	As requested by MTC
I.C.5	TIC Tours	As requested by MTC - Up to ten per year
I.C.6	Marketing support	Approximately once per year
I.C.7	Materials needed for legislative activity support	Infrequently – less than once per year
I.C.8	Materials needed for contractual, technical, legal, and administrative management related to maintaining the FCC designation for 511	Infrequently – less than once per year
I.C.9	Summaries of actions and decisions related to 511 interoperability across regions	Infrequently – approximately once per year
I.D.1 & 2	A standard set of comprehensive 511 Data Dissemination Statistics reports per the functional requirements.	Weekly and Monthly; provided with the monthly progress report; or on-demand for different time intervals
I.D.3	Monthly Trend Analysis and Conclusions about phone usage and traffic.511.org Annual Trend Analysis and Conclusions about phone usage and traffic.511.org	Monthly - with monthly progress report Annually; due by July 31st each year
I.D.4	Reporting requirements document	Update as needed

Task	Deliverable	Frequency
I.D.5	Event reports	Following events
I.D.6	Log of Major and Total Failures	Monthly - with monthly progress report
I.D.7	Statistics and data to facilitate MTC or third-party performance monitoring	Monthly - with monthly progress report
I.D.8	Monthly performance standard calculations	Monthly - with monthly progress report
I.D.9	Response to MTC performance monitoring findings	Monthly - with monthly progress report
I.D.10	Contractor determined performance monitoring results	Monthly, beginning 12/31/09
I.E.1-2	Customer Comment Reports	Monthly - with monthly progress report
I.E.3	Customer Comment Analysis	Monthly - with monthly progress report
I.F.1	Finalized transition plan	July 1, 2009
I.F.2	Successful demonstration of task transition	No later than January 1, 2010
I.F.3	Training sessions, documentation, training materials	Up to four times over five years, in the event that a renewable task is not renewed
I.F.4	Documents necessary to develop next procurement	Once; As early as January 2012
I.F.5	Project Transition Plan for the next procurement	Once; As early as January 2012
I.F.6	Successful transition to the next contractor	Once; As early as July 2012 for 4 – 6 months
II.A.1 - 2	Traffic data collection system components and data outputs that meet functional requirements and performance standards	Continuously
II.A.3	Third-party agreements and data outputs that meet functional requirements and performance standards	As needed; Continuously
II.A.2	Data outputs that meet functional requirements and performance standards	Continuously
II.A.5	511 features that meet their functional requirements	Continuously
II.A.6	Recommendations for increasing or improving system capacity	Provide as needed in monthly reports; Include in Strategic Plan and Annual Plan
II.A.7	Valid encroachment permit(s).	Ongoing
II.A.8	Updated and maintained inventory database and map of MTC data collection field sites	As changes occur or biannually
II.A.9	Identification of data collection trouble-spots and remedies	Include in monthly report, Strategic Plan and Annual Plan

Task	Deliverable	Frequency
II.A.10	Receipt of equipment delivery Spare part inventory	Upon receipt July 1 each year starting 2010
II.A.11	Archive of historical traffic data	Ongoing
II.A.12	Optimization change requests	Annually as part of the Annual Work Plan (Task I.A.5)
II.B.1 - 2	A real-time transit data collection system maintained to meet functional requirements and performance standards	Ongoing
II.B.3	A configuration data set that meets functional requirements	Ongoing
II.B.4	511 features that meet their functional requirements	Continuously
II.B.5	Recommendations for increasing or improving system capacity	Provide as needed in monthly reports; Include in Strategic Plan and Annual Plan
II.B.6	QA/QC Strategy results reports	Monthly
II.B.7	System logs and interpretation needed to support performance monitoring	No less than quarterly and no more than monthly
II.B. 8	A real-time system that complies with the Regional Real-Time Transit Data Sharing and Storage Policy	Ongoing
II.B.9	On-line or disk archive of historical real-time transit data	Ongoing
II.B.10	Materials for Real-Time Transit Technical Advisory Committee (TAC) meetings	Monthly
II.B.11	JMS Acceptance Test Plan	TBD
II.B.12	Optimization change requests	Annually as part of the Annual Work Plan (Task I.A.5)
III.A.1 - 4	A 511 traffic website maintained to meet functional requirements and performance standards	Ongoing
III.A.5	511 traffic and real-time transit website features and functions maintained to meet functional requirements and performance standards	Ongoing
III.A.6	A 511 traffic map database that is maintained to meet the functional requirements	As needed
III.A.7	Customer comments delivered to appropriate MTC staff	Ongoing
III.A.8	Report of external groups accessing 511 data	Monthly
III.A.9	Website design changes; Website design updates per new style sheets; Website design recommendations	As needed
III.A.10	Updated website	As needed
III.A.11	Real-Time Transit departure data appearing on MY	Ongoing

Task	Deliverable	Frequency
	511, the web Departure Times feature and the Stop ID look-up page per the functional requirements	
III.A.12	Recommendations for increasing or improving system capacity	Provide as needed in monthly reports; Include in Strategic Plan and Annual Plan
III.A.13	Optimization change requests	Annually as part of the Annual Work Plan (Task I.A.5)
III.B.1 - 2	A 511 phone system maintained to meet the functional requirements and performance standards	Ongoing
III.B.3	A 511 phone system free to landline (including payphone) callers throughout the Bay Area and available to all mobile phone users	Ongoing
III.B.4	511 data dissemination features that meet the functional requirements	Ongoing
III.B.5	Phone system recommendations report	As proposed by June 30, 2010
III.B.6	Directory and database of recordings	Update as needed and not less than quarterly
III.B.7	Voice recognition adjustments	Annually
III.B.8	Phone system recordings	Approximately quarterly
III.B.9	Reports documenting results of touchtone back-up system and 711 relay service connection	Monthly
III.B.10	Add and maintain the Departure Times phone user interface as transit agencies are added to the Regional Real-time Transit system or make changes to their data in system.	Ongoing
III.B.11	Recommendations for increasing or improving system capacity	Provide as needed in monthly reports; Include in Strategic Plan and Annual Plan
III.B.12	Optimization change requests	Annually as part of the Annual Work Plan (Task I.A.5)
III.C.1	Delivery of Caltrans Reverse Data feed to Caltrans	Continuously and ongoing
III.C.2	511 Traffic data feed (TOMS or its functional equivalent) ISP Agreement ISP usage report	Continuously and ongoing Execute as requested by third parties Provide revised template by 8/31/09 Include in the monthly progress report (Task I.B.2) no longer than one month in

Task	Deliverable	Frequency
		arrears.
III.C.3	511 Traffic data available to the public for development purposes. API data feed agreement	Continuously and ongoing Develop template by 9/30/09 Execute as requested by third parties
III.C.4	Link and/or trip travel time data	Within 7 days of request
III.C.5	Optimization change requests	Annually as part of the Annual Work Plan (Task I.A.5)
III.D.1	Real-time transit data feed	Continuously and ongoing
III.D.2	Dissemination of departure times for additional transit agencies	Per the real-time transit roll-out schedule
III.D.3	Information provided to transit hub signs that meets functional requirements	Continuously and ongoing
III.D.4	Optimization change requests	Annually as part of the Annual Work Plan (Task I.A.5)
III.E.1 - 2	Alerts, announcements and e-mail messages disseminated to 511 users per the functional requirements	Continuously and ongoing
III.E.3	List of registered users and unsubscribed users	Monthly
III.E.4	Additional types of SMS and email messages	As needed
III.E.5	Message error log, issue list and resolution plans	Include with monthly progress report
III.E.6	Optimization change requests	Annually as part of the Annual Work Plan (Task I.A.5)
IV.A.1	Staffed and functioning TIC in accordance with SOP documents; deliverables prescribed by the various SOP documents	Continuously 24/7
IV.A.2	Meetings with Caltrans and CHP staff	Four to six per year
IV.A.3	Emails to the MTC Project Manager about TIC staff trainings: schedule, agenda, attendance, etc.	Upon new hire, or at least every six months or whenever changes are made to the TIC SOPs or O & M Manual or whenever staff changes occur (whichever is shorter). Conduct first training by 9/30/09
IV.B.1	TIC SOPs	Update as needed and not less than annually
IV.B.2	511 Operations Manual	Update as needed and not less than annually

Task	Deliverable	Frequency
IV.B.3	TIC EOP	Update as needed and not less than annually
IV.C.1	Staffed and functioning TIC located at Caltrans District 4 headquarters	Continuously 24/7
IV.C.2	TIC equipment inventory	Continuously 24/7
IV.C.3	Recommendations for increasing or improving system capacity	Provide as needed in monthly reports; Include in Strategic Plan and Annual Plan
V.A.1	Required staffing resources	When an emergency occurs
V.A.2	Emergency staffing plans	Throughout the course of an emergency
V.A.3 - 5	Emergency related information disseminated through 511	Throughout the course of an emergency
V.A.6	Operational system	Throughout the course of an emergency
V.A.7	Meetings	Throughout the course of an emergency
V.A.8	Emergency usage reports	During and following an emergency
V.A.9	Records of hours worked by personnel and associated costs, and all other costs associated with emergency response	During and following an emergency
VI	Detailed scope of work, budget and schedule to support Task Order development.	As needed

Deliverables Approval Process

MTC approval will be required for the project deliverables listed above. Within 25 business days of Contractor's submission of a deliverable, MTC will:

- Approve submittal,
- Approve with comment,
- Reject with comments, or
- Notify Contractor of the need for an additional period for review, which MTC will specify.

For deliverables "approved with comment," the Contractor is required to address the comments in the next regularly scheduled submittal. If there is no regularly scheduled submittal, Contractor will address the comments and edits in a resubmitted version within 50 business days. For deliverables rejected with comment the Contractor will address the comments and edits in a resubmitted version within 25 business days.

In any instance where MTC does not provide approval, rejection or notification of an extended review period within the 25-day period, the submittal shall be deemed approved. MTC's right to

extend the review period is intended to allow flexibility in special circumstances where the nature of the submittal requires more involved review, and not as a diminution of MTC's obligation to promptly review submittals. MTC may also waive the approval process for selected deliverables at MTC's discretion.

APPENDIX A-5 OPTIMIZATIONS

This appendix summarizes the information in the RFP related to optimizations. An optimization is a one-time system adjustment, improvement or change that takes no more than 40 person-hours of development time, is relatively uncomplicated and low risk. Optimizations will be conducted as part of ongoing operations and maintenance. The Contractor will provide ideas for, and maintain a list of, potential optimizations using customer feedback, system reports, website and phone statistics and reports, input from MTC, input from TIC staff, and Contractor experience. The Contractor will provide a brief work plan for optimizations that will be implemented in each contract year as part of each Annual Work Plan.

The following lists the type of work that could be done through the optimizations budget. The amount of optimization work can vary from year to year based on the selected Contractor's approved budget.

Sample Optimization Tasks

Traffic Data Collection

- Reduce the percentage of system links with non-live data (i.e., estimated or interpolated data). This could be accomplished by possibly increasing the use of SpeedInfo data and/or redistributing SpeedInfo sensors within the limits of the SpeedInfo contract.
- Develop Traffic Watch algorithm for low count situations to use alternative quality checks based on comparisons with historical or other sensor data
- Any effort less than 40 person-hours to expand data coverage outside the Bay Area as prioritized by MTC. This could mean improving system algorithms, developing new interfaces, integrating data collected from field equipment provided by other regions, setting up links, re-running the Driving Times trip database to include new origins and destinations, etc.

Real-time Transit Data Collection and Dissemination

- Work with MTC staff and transit agencies to determine how best to use the transit agencies' arrived-status data.
- Adjust and improve the Java Messaging System (JMS) or Web Services data transfer applications as necessary to ensure a functional application.
- Adjust and improve the RTD Data Extraction Tool as necessary to ensure a functional application.

Traffic Web Page

Depending on the timing and scope of the traffic web page redesign, MTC may request minor changes to the traffic web page that would be considered optimizations. Such changes could include:

- Improve user ability to manipulate the traffic map on both my511.org and traffic.511.org. Specifically:
  - Enable rollover text to show on the map

  - Move route icons off the links
  - Add airport icons
  - Provide a help icon and link below the map tools at all times
  - Allow the panning tool to provide continuous panning at the edges of the 511 Traffic Map
  - Change fonts and layering to eliminate overlap issues
  - When the traffic map refreshes, do not allow it to become the focused window if another window is already up.
  - Make the "Feature and Tools" area more intuitive and clearer.
  - Update icons and tool buttons for consistency with other mapping websites.
  - Improve the refresh time
- Reorganize the display of information on traffic.511.org (e.g., group the camera list).
- Develop and implement a "thank you for your comment" auto-response feature to immediately acknowledge receipt of comments provided about traffic.511.org, My511.org, or real-time transit features.
- Improve MY 511. Specifically:
  - Add a graphical button to take people to the traffic map.
  - Allow for more than three phone numbers per account.
  - Allow MY 511 users to order trips as they wish instead of alphabetically.
  - Develop a process for MY 511 to pre-populate addresses for user's regular origins and destinations (e.g., "home," "work"). Expand the list of trip names that can be used on both MY 511 phone and web.
  - Include the static freeway map on users' MY 511 personalized home page to provide summary visual traffic data.
  - Working with the marketing contractor, make minor design modifications to the MY 511 welcome page and the personalized home page, including adjustment of graphics and text.
  - Modify the account management process to allow for a user to change her e-mail address.
  - Provide real-time transit stop ID's next to stop names, as appropriate.
  - Add the user e-mail address to 'unverified user' page so that people can see their address during the registration process to allow them to correct errors in the address.
  - Increase the number of trips that can be saved.
- Migrate to a Content Management System that will allow direct MTC editing of content on traffic.511.org, my511.org and pages associated with Real-time Transit.
- Remove compass directions related to the freeway number in the text version of 511 Driving Times.
- Provide users a link to turn off the driving time blue line if, after obtaining driving times, the user starts using the information tool.

<u>511 Phone System</u>

- Changes meeting the optimization definition as recommended by the Phone System Recommendations Report (Task III.B.6),

- Improve the call flow "repeat" sequence.
- Improve scripts to aid caller navigation.
- Avoid repeating hints that a caller has already heard, etc.
- Provide historical data on the phone (possibly).
- Provide a help message prompt if the system fails to recognize a voice command after four tries.
- Ensure that two significantly different trips are provided to the caller (and web user) in the playback of Break-a-Link.

APPENDIX A-6 ENHANCEMENTS

Enhancements are significant improvements to features, functions, data sources, or the system's underlying technologies and/or equipment. Generally speaking, and to distinguish them from optimizations, they require significant Contractor effort (e.g., more than 40 person-hours of development time) due to degree of complexity or risks likely to be encountered during development.

Enhancements will be implemented following the execution of Task Orders. The Task Orders will specify the scope, schedule, budget and payment provisions for work to be performed (e.g., time and materials or deliverables). Once MTC and the Contractor agree to the terms of a Task Order, it will be executed by both parties and work will begin. MTC and the Change Control Board will determine if projects should be considered enhancements.

This appendix lists potential enhancements that could be undertaken during the course of the contract period. Other enhancements may also be added during the contract term. The enhancements are organized into four time periods: annual assessment, year 1, year 2, and years 3-5. A simple estimate of the level of effort required for each task (high or low) is indicated.

Section II.E.1 of the RFP provides the budget assumptions MTC made in its long-term planning. Where an enhancement was specifically identified in MTC's assumptions, it is noted below.

The budget assumptions for "generic enhancements" shown in Section II.E.1 were not made by estimating the costs of the specific items identified below. The "generic enhancements" budget assumptions may or may not be sufficient to cover the costs of implementing the enhancements identified below. Proposers should follow the directions provided in Section III.J and the individual cost proposal appendices to budget for enhancements.

ANNUAL ASSESSMENT

1. Evaluate and purchase new hardware, software and communications equipment/licenses to replace systems and equipment as they near the end of their life cycles so the system uses up-to-date software, operating systems, hardware, etc. to provide optimal and cost-effect performance. The purchase schedule shall be based on *Appendix B, System Version and Installation Dates* as revised by the Contractor in the Strategic Plan (Task I.A.1) and programmed in the Annual Plan (Task I.A.5). (Low)

2. Install hardware, software and communications equipment/licenses and prepare test procedures (scripts), test and configure equipment to demonstrate that the equipment meets the functional requirements using the system test bed and staging servers. Provide Acceptance Test Plans, perform System Acceptance Tests and revise system documentation. (Low)

YEAR 1

1. Upgrade the EDFS to allow remote operator access through a web-based application, simplify data entry, and provide additional functionality (e.g., ability to easily track Caltrans construction events, etc.) (High)

2. Upgrade EDFS interfaces or develop new interfaces to adapt to changes in the Caltrans District 4 TMC software and/or begin using TMC data (e.g., Lane Closure System data). (Low)

3. Implement the web page design template on traffic.511.org and my511.org provided by the 511 Marketing Contractor. (Low)

4. Work with transit agencies (up to 7 bus/rail and ferry agencies) as directed by MTC to coordinate their integration into the real-time transit system and to collect their real-time transit data. This shall include a range of specific details, such as working with the transit agencies to meet data transfer requirements for both Java Messaging System (JMS) and, if necessary, web services definitions. (High)

5. Infill data collection sources on freeways to minimize the use of the Link Data Interpolated (LDI) to improve data accuracy and system coverage. (High)

6. Develop and implement an integrated, customizable, flexible and adaptable phone and web usage tracking system to track the 511 phone system; the complete 511.org website, including 511.org, my511.org, and the suite of modal pages (traffic, transit, rideshare, and bicycling); and e-mail/mobile device communications (e.g., alerts, e-blasts). (Low)

7. Post real-time transit stop identification numbers at bus stops, if needed. (High)

8. Provide the ability for 511 users to send text-message requests to 511 back-end servers to receive real-time traffic and transit text messages. (Low)

YEAR 2

1. Upgrade EDFS interface to adapt to changes in the CHP CAD software and/or automate data flow from CAD to the EDFS. (Low)

2. Collect and integrate data from new or different data sources provided by other agencies/entities, such as purchased data, probe data, etc (i.e., Integrate data provided by other regions such as Sacramento, San Joaquin county, etc). Support the expanded data coverage on the phone and web by update the 511 Driving Times feature, creating new .wav files, building new links, etc. (High)

3. Upgrade the overall traffic webpage, including:

    - Migrate to a new basemap for the traffic map and assess the replacement of the current GIS software,

- Upgrade the Predict-A-Trip feature (historical driving times) to provide different average historical driving times based on the users' on-time arrival sensitivity;
- Add charts, graphs, and a historical traffic map;
- Place all text input boxes for origin and destination points on a single page;
- Place driving times and traffic conditions connections on the airport page;
- Add ability to zoom into the Traffic Map near an airport when a link is clicked; and
- Link incidents (and construction and events) to driving times routes and make available for viewing on the driving times detail page and the text-based driving times page.
- Have high-priority incidents automatically show up as high-priority traffic messages. Rank them by severity score. (High)

4. Establish a fully redundant back-up system for the phone and web, including a design and strategy, securing the site, purchasing and provisioning the equipment, testing the system, etc. (High)

5. Work with transit agencies (up to 1 bus/rail and ferry agency) as directed by MTC to coordinate their integration into the real-time transit system and to collect their real-time transit data. This shall include a range of specific details, such as working with the transit agencies to meet data transfer requirements for Java Messaging System (JMS) and, if necessary, web services definitions. (Low)

6. Collect new types of data provided by other agencies/entities that will expand the system's features and functions. New types of data could include parking data, additional video, arterial travel times, congestion pricing rates, Sierra road conditions, planned construction information, metering lights status, etc. Design and build interfaces and data dissemination features and functions (for both the phone and web) to utilize the new data types. (High) ($150K assumption per Section II.E.1)

7. Provide enhanced usability for MY 511. Provide customized traffic map views that can be saved and displayed on the MY 511 personalized home page, including turning on/off layers and icons, zooming to a particular level, and naming the map view. Redesign trip selection and trip ordering. Allow the registration and account management processes to allow for the creation of multiple accounts from the same phone number and changing email address or phone numbers. (High)

8. Upgrade the GPS Analyzer tool that does analysis on a link by link basis. This should help identify bad links on trips to improve identification of failing TrafficWatch devices. (Low)

YEARS 3-5

1. Distinguish between HOV and mixed flow speeds in traffic data collection. (High)

2. Develop a more sophisticated phone survey feature to allow for branching, skipping, etc. (High)

3. Provide phone and web services in additional languages, especially Spanish and Chinese (Cantonese). (High)

4. Develop and implement a comment collection and management system that allows MTC or contractor staff to respond from a list of pre-defined responses, write their own response, or forward/reassign the comment; archives comments, responses and actions taken; indicates the status of each comment; is fully categorized and searchable, and provides reports (e.g., comments on a particular feature or positive/negative comments). (Low)

5. Migrate to a new voice recognition system, if needed. (High)

6. Upgrade the TIC EDFS to adapt to changing technology (High)

7. Make 511 phone menus easier to update without the need for system restarts. (Low)

APPENDIX B SYSTEM VERSION AND INSTALLATION DATES

511 Traffic System Component	Associated Equipment	CPU Tag	Location	Software or Function on CPU	Year Installed
Data collection	PowerEdge 6650	3CQKW21	Oakland	Microsoft Windows 2000 Server + 5 CAL's	6/6/2003
	PowerEdge 6450	3H0LW01	Seattle	Microsoft Windows 2000 Server + 5 CAL's	9/28/2001
	PowerEdge 1650	5P85Y21	Oakland	Microsoft Windows 2000 Server + 5 CAL's	6/30/2003
	PowerEdge 1550	9P85Y21	Seattle	Microsoft Windows 2000 Server + 5 CAL's	2/5/2002
	PowerEdge 6650	9WT4711	Oakland	Microsoft Windows 2000 Server + 5 CAL's	6/6/2003
	Dell 1955	BBP4QD1	San Diego AIS collocation site	CDDI, LDI, ALDF, CRF, TrafficWatch Readers, TrafficWatch Communication Links, 511 Travel Time Server	2007
	Dell 1955	6BP4QD1	San Diego AIS collocation site	CDDI, LDI, ALDF, CRF, TrafficWatch Readers, TrafficWatch Communication Links, 511 Travel Time Server	2007
TIC Operations/Data Fusion	PowerEdge 6450	B20LW01	TravInfo	Microsoft Windows 2000 Server + 5 CAL's	9/28/2001
	PowerEdge 6450	F20LW01	TIC	Vinca - Co-StandBy for W2K	10/30/2001
				Microsoft Windows 2000 Server + 5 CAL's	9/28/2001
				MS SQL Server 2000 Std Ed "Single Processor License - Unlimited CAL's"	10/22/2001
				Symantec Ghost Corp. Etd. v7.0 (24 to 49 user license group)	11/20/2001
	PowerEdge 6450	G20LW01	TIC	Symantic PCAnyWhere v10 "Host Only"	4/20/2001
				Microsoft Windows 2000 Server + 5 CAL's	9/28/2001
				MS SQL Server 2000 Std Ed "Single Processor License - Unlimited CAL's"	10/22/2001
				Symantec Ghost Corp. Etd. v7.0 (24 to 49 user license group)	11/20/2001
	Dell 1955	BQC3QD1	San Diego AIS collocation site	EDFS, Data Feed to 511 Phone and 511 Website	2007
	Dell 1955	9BP4QD1	San Diego AIS collocation site	EDFS, Data Feed to 511 Phone and 511 Website	2007
Phone	PowerEdge 1750	2616M31	TIC	Microsoft Windows 2000 Server + 5 CAL's	10/7/2003
				PcAnywhere Host Client v11	10/14/2003

511 Traffic System Component	Associated Equipment	CPU Tag	Location	Software or Function on CPU	Year Installed
	PowerEdge 1750	6616M31	TIC	Microsoft Windows 2000 Server + 5 CAL's	10/7/2003
				PcAnywhere Host Client v11	10/14/2003
				PcAnywhere Host Client v11	10/14/2003
	PowerEdge 1750	9516M31	TIC	Microsoft Windows 2000 Server + 5 CAL's	10/7/2003
				PcAnywhere Host Client v11	10/14/2003
	PowerEdge 1750	FQ85M31	TIC	Microsoft Windows 2000 Server + 5 CAL's	10/7/2003
				PcAnywhere Host Client v11	10/14/2003
	PowerEdge 1750	G516M31	TIC	Microsoft Windows 2000 Server + 5 CAL's	10/7/2003
				PcAnywhere Host Client v11	10/14/2003
	PowerEdge 1750	GQ85M31	TIC	Microsoft Windows 2000 Server + 5 CAL's	10/7/2003
				PcAnywhere Host Client v11	10/14/2003
	PowerEdge 1750	HQ85M31	TIC	Microsoft Windows 2000 Server + 5 CAL's	10/7/2003
				PcAnywhere Host Client v11	10/14/2003
	PowerEdge 1750	J516M31	TIC	Microsoft Windows 2000 Server + 5 CAL's	10/7/2003
				PcAnywhere Host Client v11	10/14/2003
	PowerEdge 1750	JQ85M31	TIC	Microsoft Windows 2000 Server + 5 CAL's	10/7/2003
				PcAnywhere Host Client v11	10/14/2003
	Dell 1955	8BP4QD1	San Diego AIS collocation site	Phone	2007
	Dell 1955	7BP4QD1	San Diego AIS collocation site	Phone	2007
	Dell 1955	DBP4QD1	San Diego AIS collocation site	Phone	2007
	Dell 1955	FBP4QD1	San Diego AIS collocation site	Phone	2007

511 Traffic System Component	Associated Equipment	CPU Tag	Location	Software or Function on CPU	Year Installed
	Dell 1955	5NR6JD1	San Diego AIS collocation site	Conversation Server	2007
	Dell 1955	CS75QD1	San Diego AIS collocation site	SQL, Conversation Server	2007
	Dell 1955	CQC3QD1	San Diego AIS collocation site	511 Manager, Phone Floodgate (phone only)	2007
Web	Dell 1955	FQC3QD1	San Diego AIS collocation site	Microsoft Windows Server 2003 R2 Standard Edition SP2, 7-Zip 4.57, ArcGIS ArcIMS, ArcGIS ArcSDE for Microsoft SQL Server, Big Brother Professional Client 3.01, ClamWin Free Antivirus 0.93, CVSNT, DriveImage XML, FileZilla, Filzip 3.06, J2SE Development Kit 5.0 Update 6, J2SE Runtime Environment 5.0 Update 6, MagicDisk 2.6.85, Microsoft .NET Framework 2.0 SP1, Microsoft .NET Framework 3.0 SP1, PSPad Editor, Python 2.5.2, Tortoise SVN 1.5.3.13783 (32-bit), WinCVS 2.0, Windows Defender, MTC 511 Traffic map icons	2007
	Dell 1955	GQC3QD1	San Diego AIS collocation site	Microsoft Windows Server 2003 R2 Standard Edition SP2, 7-Zip 4.57, ArcGIS ArcIMS, ArcGIS ArcSDE for Microsoft SQL Server, Big Brother Professional Client 3.01, ClamWin Free Antivirus 0.93, CVSNT, DriveImage XML, FileZilla, Filzip 3.06, J2SE Development Kit 5.0 Update 6, J2SE Runtime Environment 5.0 Update 6, MagicDisk 2.6.85, Microsoft .NET Framework 2.0 SP1, Microsoft .NET Framework 3.0 SP1, PSPad Editor, Python 2.5.2, Tortoise SVN 1.5.3.13783 (32-bit), WinCVS 2.0, Windows Defender, MTC 511 Traffic map icons	2007

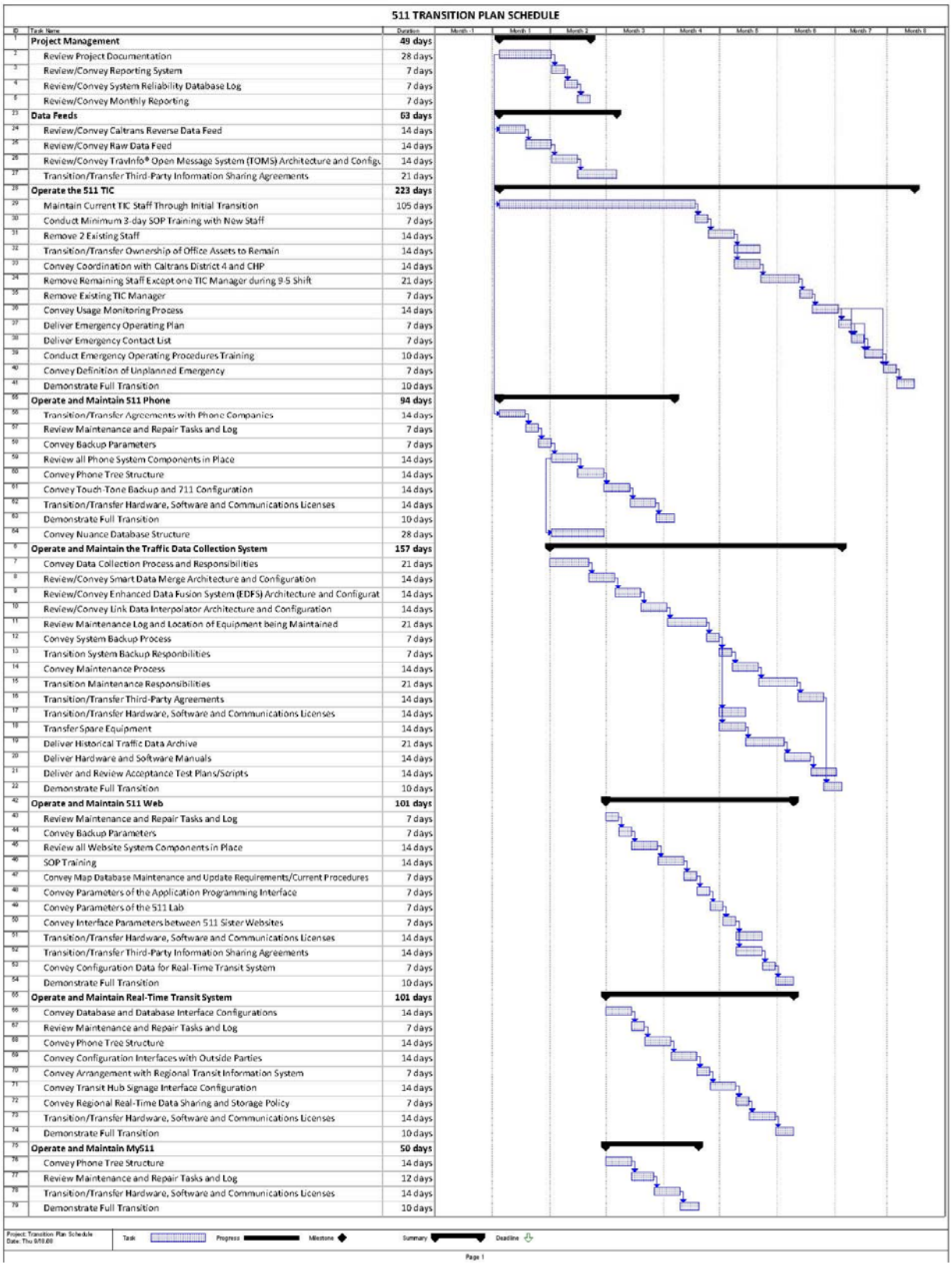
511 Traffic System Component	Associated Equipment	CPU Tag	Location	Software or Function on CPU	Year Installed
	Dell 1955	HQC3QD1	San Diego AIS collocation site	Microsoft Windows Server 2003 R2 Standard Edition SP2, 7-Zip 4.57, ArcGIS ArcIMS, ArcGIS ArcSDE for Microsoft SQL Server, Big Brother Professional Client 3.01, ClamWin Free Antivirus 0.93, CVSNT, DriveImage XML, FileZilla Client 3.0.5.2, Filzip 3.06, J2SE Development Kit 5.0 Update 6, J2SE Runtime Environment 5.0 Update 6, Java 6 Update 3, MagicDisk 2.6.85, Microsoft .NET Framework 2.0 SP1, Microsoft .NET Framework 3.0 SP1, PSPad Editor, Python 2.5.2, Tortoise SVN 1.5.3.13783 (32-bit), WinCVS 2.0, Windows Defender, MTC 511 Traffic map icons	2007
	Dell 1955	7QC3QD1	San Diego AIS collocation site	Microsoft Windows Server 2003 R2 Standard Edition SP2, IIS 6.0, Apache Tomcat 5.5, ArcGIS ArcIMS, Big Brother Professional Client 3.01, ClamWin Free Antivirus 0.93, CVSNT, DeltaCopy, DriveImageXML, FileZilla, Filzip 3.06, J2SE Development Kit 5.0 Update 6, J2SE Runtime Environment 5.0 Update 6, Jakarta Isapi Redirector, MagicDisk 2.6.93, Microsoft .NET Framework 2.0 SP1, Microsoft .NET Framework 3.0 SP1, PSPad Editor, Python 2.5.2, Tortoise SVN 1.5.3.13783 (32-bit), ICx Traffic Web Services, WinCVS 2.0, Windows Defender, MTC 511 Traffic web site, MTC 511 Portal web site	2007
	Dell 1955	8QC3QD1	San Diego AIS collocation site	Microsoft Windows Server 2003 R2 Standard Edition SP2, IIS 6.0, Apache Tomcat 5.5, ArcGIS ArcIMS, Big Brother Professional Client 3.01, ClamWin Free Antivirus 0.93, CVSNT, DeltaCopy, DriveImageXML, FileZilla, Filzip 3.06, J2SE Development Kit 5.0 Update 6, J2SE Runtime Environment 5.0 Update 6, Jakarta Isapi Redirector, MagicDisk 2.6.93, Microsoft .NET Framework 2.0 SP1, Microsoft .NET Framework 3.0 SP1, PSPad Editor, Python 2.5.2, Tortoise SVN 1.5.3.13783 (32-bit), ICx Traffic Web Services, WinCVS 2.0, Windows Defender, MTC 511 Traffic web site, MTC 511 Portal web site	2007

511 Traffic System Component	Associated Equipment	CPU Tag	Location	Software or Function on CPU	Year Installed
	Dell 1955	9QC3QD1	San Diego AIS collocation site	Microsoft Windows Server 2003 R2 Standard Edition SP2, IIS 6.0, Apache Tomcat 5.5, ArcGIS ArcIMS, Big Brother Professional Client 3.01, ClamWin Free Antivirus 0.92, CVSNT, DeltaCopy, DriveImageXML, FileZilla, Filzip 3.06, J2SE Development Kit 5.0 Update 6, J2SE Runtime Environment 5.0 Update 6, Jakarta Isapi Redirector, MagicDisk 2.6.93, Microsoft .NET Framework 2.0 SP1, Microsoft .NET Framework 3.0 SP1, PSPad Editor, Python 2.5.2, Tortoise SVN 1.5.3.13783 (32-bit), ICx Traffic Web Services, WinCVS 2.0, Windows Defender, MTC 511 Traffic web site, MTC 511 Portal web site	2007
MY 511	Dell 1950	3Z3JXC1	San Diego AIS collocation site	Windows Server 2003, Mail Server, Alert Engine, Phone Queue	2007
	Dell 1950	5Z3JXC1	San Diego AIS collocation site	Windows Server 2003, IIS, MY 511 Application, Web Front-End	2007
	Dell 1950	6Z3JXC1	San Diego AIS collocation site	Windows Server 2003, IIS, MY 511 Application, Web Front-End	2007
	Dell 2950	90NKXC1	San Diego AIS collocation site	Windows Server 2003, SQL Server 2005, SQL	2007
	Dell 2950	B0NKXC1	San Diego AIS collocation site	Windows Server 2003, SQL Server 2005, SQL	2007
	Dell MD3000	DL0KXC1	San Diego AIS collocation site	Disk Array	2007
Real-Time Transit	Dell 1955	GBP4QD1	San Diego AIS collocation site	Real-Time Transit, Dynamic Transit Data Interface	2007
Data Dissemination	PowerEdge 2650	1WKV831	Oakland, CA	Microsoft Windows 2000 Server + 5 CAL's,	8/19/2003
	PowerEdge 2550	1ZZ5711	MTC 511 TIC	Microsoft Windows 2000 Server + 5 CAL's	2/7/2002
	PowerEdge 1650	2MD3321	MTC 511 TIC	Windows 2000 Server	11/21/2002
	PowerEdge 2550	3ZZ5711	MTC 511 TIC	Microsoft Windows 2000 Server + 5 CAL's	2/7/2002
	PowerEdge 1650	444RD21	Rockville	Microsoft Windows 2000 Server + 5 CAL's	2/14/2003

511 Traffic System Component	Associated Equipment	CPU Tag	Location	Software or Function on CPU	Year Installed
	PowerEdge 6450	4H0LW01	TravInfo	Microsoft Windows 2000 Server + 5 CAL's	9/28/2001
	PowerEdge 2650	4ZWB521	Rockville	Microsoft Windows 2000 Server + 5 CAL's	12/19/2002
	PowerEdge 2550	4ZZ5711	MTC 511 TIC	Microsoft Windows 2000 Server + 5 CAL's	2/7/2002
	PowerEdge 1650	504D821	Oakland	Microsoft Windows 2000 Server + 5 CAL's	1/8/2003
	PowerEdge 2650	6ZWB521	Rockville	Microsoft Windows 2000 Server + 5 CAL's	12/19/2002
	PowerEdge 2550	6ZZ5711	MTC 511 TIC	Microsoft Windows 2000 Server + 5 CAL's	2/7/2002
	PowerEdge 6450	778Z611	TravInfo	Microsoft Windows 2000 Server + 5 CAL's	2/5/2002
	PowerEdge 6450	878Z611	MTC 511 TIC	Vinca - Co-StandBy for W2K	10/30/2001
				Microsoft Windows 2000 Server + 5 CAL's	2/5/2002
	PowerEdge 1550	90DDW01	MTC 511 TIC	Microsoft Windows 2000 Server + 5 CAL's	9/28/2001
				Symantec Ghost Corp. Etd. v7.0	11/20/2001
	PowerEdge 2550	CZZ5711	Rockville	Microsoft Windows 2000 Server + 5 CAL's	2/6/2002
	PowerEdge 6450	D20LW01	Oakland	Microsoft Windows 2000 Server + 5 CAL's	9/28/2001
	PowerEdge 1650	GLD3321	Rockville Test Lab	Windows 2000 Server	11/21/2002
	PowerEdge 2550	GZZ5711	MTC 511 TIC	Microsoft Windows 2000 Server + 5 CAL's	2/6/2002
	PowerEdge 2550	HZZ5711	Rockville	Microsoft Windows 2000 Server + 5 CAL's	2/6/2002
Data Feed	Dell 1955	CBP4QD1	San Diego AIS collocation site	Java Messaging Service - traffic and transit	2007
	Dell 1955	5BP4QD1	San Diego AIS collocation site	Java Messaging Service - traffic and transit	2007
	Dell 1955	6QC3QD1	San Diego AIS collocation site	TOMS	2007
Backend Database	Dell 1955	HMR6JD1	San Diego AIS collocation site	SQL, Phone Emergency Abbreviated System (EAS) – Regional Disaster, Phone Emergency Abbreviated System (EAS) – Subregional Disaster, Detour Driving Times, Travel Alert Phone Menu	2007
	Dell 1955	7S75QD1	San Diego AIS collocation site	SQL	2007

511 Traffic System Component	Associated Equipment	CPU Tag	Location	Software or Function on CPU	Year Installed
	Dell 1955	6S75QD1	San Diego AIS collocation site	SQL	2007
	Dell 1955	8S75QD1	San Diego AIS collocation site	SQL	2007
	Dell 1955	JMR6JD1	San Diego AIS collocation site	SQL	2007
	Dell 1955	9S75QD1	San Diego AIS collocation site	SQL	2007
Backend Server	Dell 1955	BS75QD1	San Diego AIS collocation site	Web Logic, Phone Emergency Abbreviated system (EAS) - Regional Disaster, Phone Emergency Abbreviated System (EAS) – Subregional Disaster, Customer Comment Features	2007
	Dell 1955	8TX2JD1	San Diego AIS collocation site	Web Logic, Phone Emergency Abbreviated system (EAS) - Regional Disaster, Phone Emergency Abbreviated System (EAS) – Subregional Disaster, Customer Comment Features	2007
	Dell 1955	1NR6JD1	San Diego AIS collocation site	Web Logic, Phone Emergency Abbreviated system (EAS) - Regional Disaster, Phone Emergency Abbreviated System (EAS) – Subregional Disaster, Customer Comment Features	2007
	Dell 1955	7NR6JD1	San Diego AIS collocation site	XML,Voice Interface Servlet	2007
	Dell 1955	8NR6JD1	San Diego AIS collocation site	6BP4QD1	2007
Admin	Dell 1955	2NR6JD1	San Diego AIS collocation site	Admin, Domain Contoller 1 & DHCP Server	2007
	Dell 1955	3NR6JD1	San Diego AIS collocation site	Admin, Domain Controller 2, Whats Up Gold (SNMP)	2007
Internet1	Dell 1955	4NR6JD1	San Diego AIS collocation site	Internet, email, ftp server, Bugzilla, Wiki	2007

APPENDIX C PRELIMINARY TRANSITION PLAN



APPENDIX D 511 ASSETS FOR ADDING VALUE &/OR GENERATING REVENUE

MTC is exploring options for revenue generation or adding value to the 511 system using 511's available assets. Adding value could exist in several forms, including but not limited to partnerships, advertisement, value-added services available by subscription, or product placement on 511. Any strategy must certainly take into account 511 users' desire to access their information quickly. Strategies that are detrimental to the customer experience would lead to diminished usage of the 511 service, and therefore, would not be pursued.

511 has several assets that have the possibility of being used to add value to the contract. These include:

- 511 phone service;
- 511 web site (511.org);
- Traffic and transit data feeds; and
- Various print collateral.

The following sections describe possible strategies, but the list is by no means exhaustive. Additionally, discussion of the strategy does not constitute an endorsement or approval of the strategy by MTC; all strategies will need to be explored in detail in order to understand both the potential for revenue generation and the possible impact to the 511 user.

511 Phone Service & Web Site

Advertising & Sponsorships

On the 511 phone service, a naming rights or sponsorship program would provide a "brought to you by" statement at the top of the call (full naming rights) or deeper within the Interactive Voice Response (IVR) system (e.g., after hearing driving time predictions, the caller could hear, "These driving times were brought to you by…"). Revenue potential is greater at the front end of a call since sponsors or partners will want to ensure their message is heard. Front-end messages, however, are potentially more disruptive to the user experience. There is also a potential for "opt-in" messaging in which the caller is given a choice to hear a 3rd party message.

Sponsorships on the web could take several forms, from sole sponsor to page/micro-site/topic sponsors. Promotional partnerships could be for pages on the site and limited to specific duration or events, or even be formulated to begin or expire upon pre-determined conditions (e.g. sessions, page views, responses, etc.). 511.org currently uses short-term promotional partnerships to trade presence on 511.org for display on other regional web sites but does not generate revenue from these activities.

MTC does not currently have an advertising policy for 511.

Subscription Services

511 currently provides enhanced personalized information through the free MY 511 service. Such personalized services could eventually be a subscription fee-based service. Alternatively,

specialized information could be available by subscription, such as parking availability and reservations.

Product Placement
As an alternative to pure advertisements, private traveler/transportation service companies could purchase space for their product under the appropriate phone menu or within a web page. For example, a parking company or taxi could purchase placement on 511 within a special parking menu or page. Instead of the user paying for a subscription service, the company itself would pay to be available on 511. Private transportation service companies are not currently available on 511.

Traffic & Transit Data Feeds
MTC currently provides our traffic and transit information data feeds to interested companies free-of-charge. MTC instead could charge companies for receiving the data, or charge for particular uses of the data feed, for example, if the data feed was used for a fee-based subscription service or was repackaged and sold to another company.

Print Collateral

MTC produces various semi-permanent items that promote 511, such as street banners and brochures, as well as short-term advertising campaigns. Placement on these materials could be included as part of a full naming rights sponsorship.

APPENDIX E FORMAT FOR PRESENTATION OF PROJECT BUDGET BY YEAR

511 Traffic Contractor
Proposed Budgets by Year for Project Elements I through V (in 1,000s of Nominal $)

		FY09-10	FY10-11	FY11-12	FY12-13	FY13-14	TOTAL
1	*MTC Estimated Revenue*	$5.34	$7.64	$6.38	$6.37	$6.41	$32.14
2	Funds Unbudgeted from Prior Year(s)	$0					
3	Additional Revenue to be Generated from Value-Added Services						
4	Total Estimated Revenue Available						$
5	Proposed Budget						$
6	Funds Unbudgeted						$

1	Estimated Revenue =	The amount MTC has budgeted for the project for the year.
2	Funds Unbudgeted from Prior Years/Period =	The amount available from prior years as a result of proposing a budget (line 4) that is less than the estimated revenue (line 1) in the previous year(s).
3	Additional Revenue to be Generated or Value of Value-Added Services=	An estimate of the amount of value generated by the proposed value-added strategies. .
4	Total Available =	Sum of the MTC estimated project revenue (line 1), funds not budgeted in prior years (line 2), and additional revenue anticipated from revenue-generation strategies.
5	Proposed Budget =	Your team's proposed cost budget for the fiscal year, including lump sum payments and enhancements.
6	Funds Unbudgeted =	Total revenue available for the year (line 4) minus your team's proposed budget for the year. In no year, can this be less than zero.

Note: This table is provided in Word format on MTC's website at http://www.mtc.ca.gov/jobs/.

APPENDIX F RATE SHEET

Instructions for completing Appendix F: Rate sheet

1. In the pink cell, enter the prime Contractor's name.
2. In the green cell, enter the name of the Project Manager.
3. Provide rates for all positions. In the "Name or position" and "Firm" columns, enter the name of key personnel or the position for non-key personnel and the corresponding firm. There are 15 rows for each fiscal year; additional rows may be added as needed.
4. In the blue cells, enter the salary, overhead, profit and any other costs included in the fully loaded hourly rate in the appropriate column.
5. Under the "Fully loaded hourly rate" column, enter the sum of the previous 4 columns.

Note that formulas are not provided in the Excel version of the following table that is available on MTC's website at http://www.mtc.ca.gov/jobs/. Proposers are encouraged to use formulas where appropriate.

APPENDIX F: RATE SHEET

Team:

Project Manager:

Proposed Hourly Rates by Year		Name or position (note 1)	Firm	Salary (hourly rate)	Overhead	Profit	Other (note 2)	Fully loaded hourly rate (note 3)
FY09-10	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
FY10-11	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							

Proposed Hourly Rates by Year		Name or position (note 1)	Firm	Salary (hourly rate)	Overhead	Profit	Other (note 2)	Fully loaded hourly rate (note 3)
FY11-12	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
FY12-13	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							

FY13-14	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							

Note 1: If staff changes occur, the replacement staff must receive the same or lower salary.
Note 2: Bidders must specifically identify what constitutes any "Other" costs included in this column.
Note 3: Fully loaded hourly rate = Salary + Overhead + Profit + Other

APPENDIX G FORMAT FOR DEVELOPMENT OF ANNUAL LUMP SUM BUDGETS AND PROJECT BUDGET BY TASK

Proposers must provide annual cost proposals for FY09-10 to FY13-14. To prepare the cost proposals, MTC has prepared an Excel workbook of templates for proposer use that is available on MTC's website at http://www.mtc.ca.gov/jobs/. MTC has not provided formulas in the excel worksheets. The workbook includes the following templates:

Table A:	Development of Annual Lump Sum Budget FY2009-10
Table B:	Development of Annual Lump Sum Budget FY2010-11
Table C:	Development of Annual Lump Sum Budget FY2011-12
Table D:	Development of Annual Lump Sum Budget FY2012-13
Table E:	Development of Annual Lump Sum Budget FY2013-14
Table F:	Enhancements Budget FY2010 to FY2014
Table G:	Payment Summary FY2010 to FY2014

Proposers may modify the templates to meet their needs, *but each cost proposal must include at a minimum the level of detail depicted in the templates.* For example, proposers could add rows to provide more detail at the task level or add notes, explanation, and assumptions.

Specifically, the Annual Lump Sum Budget must show the:

- Fully loaded staff labor-hour budgets for the tasks in Project Elements I – IV and their resulting costs,
- Direct costs associated with the tasks,
- Task-level detail as defined in the templates,
- Optimizations budget,
- Total annual lump cost for Project Elements I – IV, and

After completing the Annual Lump Sum Budget templates, proposers must complete the Table F, the annual enhancements budget followed by Table G, the summary tables, which depict, for each year, the proposed lump sums, their component parts, the enhancements budget, and any revenue generation.

Instructions for Completing Tables A - E:

1. Complete one table per fiscal year (e.g., Table A for FY2009-10)
2. In the green cells, enter the names and firms of assigned personnel. If you have non-key personnel, enter the position name and indicate their firm. Additional columns may be added as needed. For Project Element IV (TIC), the personnel or position should be consistent with the proposed TIC staffing plan.
3. In the yellow cells, enter the fully loaded hourly rate (from Appendix F) of each corresponding personnel or position.
4. In the orange cells, enter the hours by task for each personnel or position.
5. In the "Team Labor Hours" column, sum the hours (orange columns) by task.

6. In the "Team Labor Cost" column, calculate the total labor cost of each task by multiplying the fully loaded hourly rates (yellow cells) by the budgeted hours for each personnel/position and summing.
7. In the blue area, enter the hardware, software, materials, travel and other direct costs by task under the appropriate column.
    a. Include any markup/profit you will charge on direct costs in the column "Direct Cost Markup."
8. In the "Team TOTAL COST" column, enter the sum of the previous columns ("total labor cost" to "Direct Cost Markup").
9. In the white subtotal (or sum) rows, enter the requested subtotal.
10. In the last row of Tables A through E, enter the totals of each column for the fiscal year. The total shall contain all costs for the project including overhead and profit.

Instructions for Completing Table F: Enhancements Budget FY2010 to FY2014

1. Based on your proposed work plan and approach, itemize the enhancements you anticipate addressing each year in the first column.
2. Provide an estimate of the budget amount you are reserving for the particular enhancement in the appropriate year column; dividing the estimate into labor costs and total direct costs and providing a total per the column headings.

Instructions for Completing Table G: Payment Summary FY2010 to FY2014

1. Add the Team Total Costs in each column of Table G.1 to show the Annual Lump Sum Cost for Project Elements I – IV.
2. Divide the Annual Lump Sum Cost by 12 to provide the Average Monthly Lump Sum Cost.
3. Sum all the proposed costs associated with tasks other than optimizations and enter this subtotal in Table G.2.
4. Sum all the proposed optimizations costs in Table G.1 and enter this subtotal in Table G.2.
5. Add the Team Total Costs in each column of Table G.2 to show the Annual Lump Sum Cost for Project Elements I – IV, which should be the same total shown in Table G.1.
6. In Table G.3, include the annual lump sum costs from Table G.1and 2 and the annual enhancement costs from Table F and calculate the Annual Total Costs..
7. If applicable, add a line item for the projected annual revenue from each Revenue-generation project.
8. Calculate the Annual Total Budget by subtracting the Annual Revenues from the Annual Total Costs.

APPENDIX H MTC 511 TRAFFIC CONTRACT TERMS AND CONDITIONS

The contents of this appendix can be found in a separate document available on the MTC website at http://www.mtc.ca.gov/jobs/ and titled, *Appendix H, MTC 511 Traffic Contract Terms and Conditions*,

APPENDIX I REQUESTS FOR EXCEPTIONS OR MODIFICATIONS

RFP Section	Relevant Provision	Requested Action
	1.	
	2.	
	3.	
	4.	
	5.	
	6.	
	7.	
	8.	
	9.	
	10.	
	11.	
	12.	

Note: This table is provided in Word format on MTC's website at http://www.mtc.ca.gov/jobs/.

APPENDIX J CALIFORNIA LEVINE ACT STATEMENT

California Government Code § 84308, commonly referred to as the "Levine Act," precludes an officer of a local government agency from participating in the award of a contract if he or she receives any political contributions totaling more than $250 in the 12 months preceding the pendency of the contract award, and for three months following the final decision, from the person or company awarded the contract. This prohibition applies to contributions to the officer, or received by the officer on behalf of any other officer, or on behalf of any candidate for office or on behalf of any committee.

MTC's commissioners include:

Tom Ammiano	Dorene M. Giacopini	Jon Rubin
Tom Azumbrado	Federal D. Glover	Bijan Sartipi
Tom Bates	Scott Haggerty	James P. Spering
Dave Cortese	Anne W. Halsted	Adrienne J. Tissier
Dean J. Chu	Steve Kinsey	Amy Worth
Bill Dodd	Sue Lempert	Ken Yeager
	Jake Mackenzie	

1. Have you or your company, or any agent on behalf of you or your company, made any political contributions of more than $250 to any MTC commissioner in the 12 months preceding the date of the issuance of this request for qualifications?

   ___ YES ___ NO
   If yes, please identify the commissioner: _____

2. Do you or your company, or any agency on behalf of you or your company, anticipate or plan to make any political contributions of more than $250 to any MTC commissioners in the three months following the award of the contract?

   ___ YES ___ NO
   If yes, please identify the commissioner: _____

Answering yes to either of the two questions above does not preclude MTC from awarding a contract to your firm. It does, however, preclude the identified commissioner(s) from participating in the contract award process for this contract.

_____ _____
DATE (SIGNATURE OF AUTHORIZED OFFICIAL)

_____
(TYPE OR WRITE APPROPRIATE NAME, TITLE)

_____
(TYPE OR WRITE NAME OF COMPANY)

APPENDIX K DEPARTMENT OF TRANSPORTATION REQUIREMENTS

1. Equal Employment Opportunity. Consultant shall not, on the grounds of race, color, sex, age, religion, national origin, ancestry, physical handicap, medical condition, or marital status either discriminate or permit discrimination against any employee or applicant for employment in any manner prohibited by Federal, State or local laws. In the event of Consultant non-compliance, MTC may cancel, terminate or suspend the Agreement in whole or in part. Consultant may also be declared ineligible for further contracts with MTC.

   Consultant and its subcontractors shall take affirmative action to ensure that applicants are employed, and that employees are treated during their employment, without regard to their race, religion, color, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Consultant and its subcontractors shall post in conspicuous places, available to all employees and applicants for employment, a notice setting forth these provisions.

2. Disadvantaged Business Enterprise (DBE) and Small Business Enterprise Policy.

   2.1. Disadvantaged Business Enterprise (DBE) Participation

   A. This Agreement is subject to 49 CFR, Part 26 entitled "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs." Contractors who obtain DBE participation on this contract will assist Caltrans in meeting its federally mandated statewide overall DBE goal.

   B. DBE and other small businesses, as defined in 49 CFR, Part 26 are encouraged to participate in the performance of agreements financed in whole or in part with federal funds. The Contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The Contractor shall carry out applicable requirements of 49 CFR, Part 26 in the award and administration of US DOT- assisted agreements. Failure by the Contractor to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as the recipient deems appropriate.

   C. Any subcontract entered into as a result of this Agreement shall contain all of the provisions of this section.

   2.2. Performance of DBE Contractors and other DBE Subcontractors/Suppliers

   A. A DBE performs a commercially useful function when it is responsible for execution of the work of the Agreement and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially

useful function, the DBE must also be responsible with respect to materials and supplies used on the Agreement, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, evaluate the amount of work subcontracted, industry practices; whether the amount the firm is to be paid under the Agreement is commensurate with the work it is actually performing, and other relevant factors.

B. A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, Agreement, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, examine similar transactions, particularly those in which DBEs do not participate.

C. If a DBE does not perform or exercise responsibility for at least thirty percent of the total cost of its Agreement with its own work force, or the DBE subcontracts a greater portion of the work of the Agreement than would be expected on the basis of normal industry practice for the type of work involved, it will be presumed that it is not performing a commercially useful function.

3. Title VI of Civil Rights Act of 1964. Consultant agrees to comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d) and its implementing regulations in 49 CFR Part 21.

4. Debarment. In contracts over $25,000, Consultant is required to certify, prior to executing a contract, that neither it nor its principals have been debarred from certain federal transactions by any Federal agency and to require any subcontractors with subcontracts over $25,000 to provide a similar certification. (A copy of the required certification is included with this Appendix.)

5. Audit and Inspection of Records. Consultant shall permit the authorized representatives of DOT, Federal Transit Administration (FTA) or the Federal Highway Administration (FHWA), and the Comptroller General of the United States to inspect and audit all data and records of the Consultant relating to its performance under this Agreement from the date of this Agreement until four (4) years after audit. This requirement must be passed along to subcontractors, excluding purchase orders not exceeding $25,000.

6. Subcontractors

   a. Nothing contained in this Agreement or otherwise, shall create any contractual relation between the MTC and any subcontractors, and no subcontract shall relieve the Contractor of his/her responsibilities and obligations hereunder. The Contractor agrees to be as fully responsible to the MTC for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by the Contractor. The Contractor's obligation to pay its subcontractors is an independent obligation from the MTC’s obligation to make payments to the Contractor.

b. Any subcontract in excess of $25,000, entered into as a result of this Agreement, shall contain all the provisions stipulated in this Agreement to be applicable to subcontractors.

c. Contractor shall pay its subcontractors within ten (10) business days from receipt of each payment made to the Contractor by the MTC.

d. Any substitution of subcontractors must be approved in writing by the MTC's Project Manager in advance of assigning work to a substitute subcontractor.

7. Federal Grant Requirements. Those laws, statutes, ordinances, rules, regulations and procedural requirements which are imposed on MTC as a recipient of federal funds are imposed on Consultant, including compliance with 49 CFR Part 18, FTA Circular 4220.1E and the current FTA Master Agreement, a copy of which is available through MTC.

8. Identification of Documents. All reports and other documents completed as part of this Agreement shall carry the following notation on the front cover or title page:

   The preparation of this report has been financed in part by grants from the Federal Transit Administration, U.S. Department of Transportation. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

9. Rights in Data. The Federal Government reserves a royalty-free, nonexclusive, and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, for Federal Government purposes: (a) the copyright in any work developed under this Agreement; and (b) any rights of copyright to which MTC or Consultant purchases ownership under this Agreement.

10. State Energy Conservation Plan. Consultant shall comply with all mandatory standards and policies relating to energy efficiency that are contained in the State Energy Conservation Plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. § 6321 *et seq*.).

11. Clean Air and Water Pollution Act. Consultant agrees to comply with the applicable requirements of all standards, orders, or requirements issued under the Clean Air Act (42 U.S.C. § 7501 *et seq*.), the Clean Water Act (33 U.S.C. § 1251 *et seq*.), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15).

12. Restrictions on Lobbying. In agreements over $100,000, Consultant is required to execute a certificate indicating that no federal funds will be used to lobby federal officials and to disclose lobbying activities financed with non-federal funds. (Certificate attached.)

APPENDIX K-1 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

(Third Party Contracts and Subcontracts over $25,000)

Instructions for Certification:

1. By signing and submitting this bid or proposal, the prospective lower tier participant is providing the signed certification set out below.

2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, MTC may pursue available remedies, including suspension and/or debarment.

3. The prospective lower tier participant shall provide immediate written notice to MTC if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "persons," "lower tier covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549 [49 CFR Part 29]. You may contact MTC for assistance in obtaining a copy of those regulations.

5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized in writing by MTC .

6. The prospective lower tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List issued by U.S. General Service Administration.

8. Nothing contained in the foregoing shall be construed to require establishment of system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

9. Except for transactions authorized under Paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to all remedies available to the Federal Government, MTC may pursue available remedies including suspension and/or debarment.

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION LOWER TIER COVERED TRANSACTION

(1) The prospective lower tier participant certifies, by submission of this bid or proposal, that neither it nor its "principals" [as defined at 49 CFR Section 29.105(p)] is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) When the prospective lower tier participant is unable to certify to the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Date	(signature of authorized official)
	(type/print name and title)

APPENDIX K-2 CERTIFICATION OF RESTRICTIONS ON LOBBYING

I, _____ hereby certify on behalf of _____ that:
(name and title of grantee official) (name of grantee)

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, and contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance is placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Executed this _____ day of _____, 2007.

By _____
(signature of authorized official)

_____
(title of authorized official)

APPENDIX K-3 BIDDER'S LIST OF SUBCONTRACTORS (DBE AND NON-DBE) - PART I

The bidder shall list all subcontractors (both DBE and non-DBE) in accordance with Section 2-1.054 of the Standard Specifications and per Title 49, Section 26.11 of the Code of Federal Regulations. This listing is required in addition to listing DBE Subcontractors elsewhere in the proposal. **Photocopy this form for additional firms.**

Firm Name/Address/ City, State, ZIP	Phone/ Fax	Annual Gross Receipts	Description of Portion of Work to be Performed	Local Agency Use Only (Certified DBE?)
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*

Distribution: 1) Original - Local Agency File

APPENDIX K-3 BIDDER'S LIST OF SUBCONTRACTORS (DBE AND NON-DBE) - PART II

The bidder shall list all subcontractors who provided a quote or bid but were not selected to participate as a subcontractor on this project. This is required for compliance with Title 49, Section 26 of the Code of Federal Regulations. Photocopy this form for additional firms.

Firm Name/Address/ City, State, ZIP	Phone/ Fax	Annual Gross Receipts	Description of Portion of Work to be Performed	Local Agency Use Only (Certified DBE?)
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*

Distribution: 1) Original - Local Agency File

APPENDIX L GLOSSARY

511: the Bay Area's free traveler information service, on the phone at 511 and on the web at 511.org.

511 Manager: a web-based utility application that enables users to view and/or manage various types of pre-recorded messages that can play back at different points within the 511 phone system, such as a floodgate message at a selected menu location.

AIS hosting facility: the facility where the servers that support the 511 phone service, the 511 Traffic page, and the 511.org home page are located.

All Nighter: regional coordinated bus service from approximately 1 to 5 a.m. throughout Alameda, Contra Costa, San Francisco and San Mateo counties, operated by five transit agencies - AC Transit, County Connection, Muni, SamTrans and Wheels.

ANI (Automatic Number Identification): a service that provides the receiver of a telephone call with the number of the calling phone.

ATIS Advanced Traveler Information Systems: Systems such as 511 that utilize information and communication technologies to collect, fuse and disseminate multi-modal information to a wide range of travelers.

Automatic Link Data Fusion (ALDF): a combination of computer hardware and software elements that provide the capability to read, record, and publish all roadway speed and travel time data produced from data collection component sources and historical data, and select the highest quality data among these sources for use by the 511 system.

Break-A-Link: a feature in the Congestion OI application that prevents driving times from being disseminated for roadway sections that are closed.

Caltrans Data Detection Interface (CDDI): a combination of computer hardware and software elements that provide the capability to collect data received from Caltrans detector stations and validate this data before publishing it to other 511 systems for further processing. CDDI Analyzer

Caltrans Data Detection Interface Analyzer (CDDI Analyzer): a distinct application that is not part of the CDDI 'production' environment. It is a utility used for performing a detailed analysis of the CDDI data to determine which devices are producing bad data. The results of this analysis are used to disable data from devices that produce bad data.

Change Control Board (CCB): The CCB consists of MTC and Contractor project management-level staff and provides overall project guidance. The CCB reviews issues, makes decisions and sets priorities. The CCB typically meets bi-weekly to resolve bugs, provide guidance on whether an improvement should be considered an enhancement or optimization, and to prioritize work. The board also holds an annual strategic planning session to finalize the annual update to the Five Year Strategic Plan.

Clicks: a user's selection of a text or image link on a web site.

Congestion OI: A software application that allows the 511 Traveler Information Center operators to overwrite speed data.

Corridor Mobility Improvement Account (CMIA): a statewide program for congestion improvement projects.

511 Driving Times: a feature on the 511 phone service and the 511 Traffic page that calculates the time it takes to travel between two points.

Downloads: the number of files transmitted over a network.

Emergency Abbreviated System (EAS) for the Phone: two phone menu structures that are available for use during emergency situations. The regional phone EAS allows the restriction of information disseminated during an emergency in order to provide critical information to as many callers as possible. The sub-regional phone EAS allows the organization of information for a sub-regional planned event or emergency in a separate menu from the regular main menu, thus making it easier for callers to access the emergency information.

Emergency Abbreviated System (EAS) for the website: an additional webpage that summarizes emergency information in a blog format. At a minimum, the regular homepage and traffic pages are redirected to this EAS webpage during major, regional emergencies.

Enhanced Data Fusion System (EDFS): a combination of computer hardware and software systems at the TIC that communicates with other subsystems, including several interrelated applications that provide the TIC staff with the ability to enter, view, and analyze relevant traffic data, and an Internet-enabled system to receive event input from other agencies and display existing events. The data fusion system extends to and includes the interfaces with the data collection and data dissemination servers.

Enhancement: A significant improvement to a feature, function, data source, or the system's underlying technology. Generally speaking, and to distinguish them from optimizations, they require significant Contractor effort (e.g., more than 40 hours of development time) due to degree of complexity or risks likely to be encountered during development. Enhancements will be undertaken through individual Task Orders.

Event: A circumstance that cause out-of-the-ordinary 511 usage, such as a usage spike due to weather, a planned transportation system disruption, or an emergency or a usage dive due to system failure.

Event OI: The interface through which TIC staff enter incident information into the EDFS. While this interface is titled the "Event OI," TIC staff enter more than just events as the term "event" is defined above. (See definition of "incident," below.)

Feature: A tool on the 511 phone service or 511.org that disseminates traveler information.

Group Enabled Mobility and Safety (GEMS): Vehicle Infrastructure Integration mobility and safety projects being developed under the SafeTrip-21 program for USDOT.

Historical Driving Times: driving times generated based on historical rather than live data through the Predict-a-Trip tool on the 511 Traffic page.

Hits: each file sent to a browser by a web server.

Incident: an occurrence that blocks the flow of traffic. To be entered into the EDFS, the incident must generally block at least one traffic lane.

Link Data Interpolator (LDI): a software program that provides the capability to read ALDF published link speed data to generate (synthesize) data for other links. The LDI estimates travel time and speed based on speeds and travel times along nearby links.

Maintenance includes:

- Regularly scheduled preventive maintenance,
- Troubleshooting and fixing system failures,
- Responding to and recovering from hardware and software outages,
- Repairing equipment,
- Updating software,
- Backing up system data,
- Archiving backup media,
- Modifying the tools that collect and process 511 traffic information, and
- Optimizing system performance by making improvements or changes that take 40 or fewer hours of development time.

Major Failure: when one or more specific phone or web feature(s) are not available for users for 10 minutes or longer.

MY 511: 511's personalized service that allows users to build their own home page as well as bypass the 511 phone menu to obtain current information for their trips.

Nuance Voice Platform Lite (NVP Lite): back-up phone system to ensure that transfers out to other programs and transit agencies continue to be supported if the interactive voice response system experiences difficulty.

Optimization: A modest improvement or change to the 511 service that takes no more than 40 person hours of development time and that is relatively uncomplicated, has relative low risk and is issue-adverse. . These improvements will be made through ongoing system maintenance. Optimizations can be made without needing a separate Scope of Work or functional requirements, etc.

Page Views: a request for a file whose type is defined as a page in log analysis, irrespective of how many hits are generated.

Phone Emergency Abbreviated System (EAS) – Regional Disaster: a version of the 511 phone service that enables only a subset of the existing capabilities to be available to the public during a regional disaster.

Phone Emergency Abbreviated System (EAS) – Sub-Regional Disaster: an additional menu within the 511 phone service that provides travel conditions information during a sub regional disaster.

Predict-A-Trip: a feature of the 511 Traffic page that provides typical travel time and speed information for user-selected driving times routes based on historical information.

ProjectSolve: the online project management tool where project files are archived.

Real-Time Transit Technical Advisory Committee (TAC): The group of transit agency representatives that advises the real-time transit project.

Referrals: activity generated through external web sites to 511.org.

San Francisco Bay Area Regional Intelligent Transportation Systems ITS architecture and standards: A roadmap for transportation systems integration in the Bay Area over the next 10 years. The plan provides methods to make the most out of technological advances by developing a strategy for deployment and a framework, or architecture, for linking the region's transportation systems.

Sensys: a traffic data source that combines magnetic sensors with low-power radio technology to create a wireless vehicle detection system.

Sister pages: the four modal pages within the 511.org web site – Traffic, Transit, Rideshare, and Bicycling.

Smart Corridors: a multi-modal advanced transportation management system, which provides real-time traffic conditions on local arterials to the public.

Smart Data Merge: an algorithm that allows the use of spot speed data for individual links that are contained within a Traffic Watch segment. The Traffic Watch segment is comprised of several links, some with spot speeds and some without spot speeds.

Special Event: A planned event that will is expected to have an effect on traffic (e.g., sporting events, concerts, festivals, etc.)

SQL Web Reports: a Web-based tool that generates custom reports of 511 usage.

System Reliability Database: a database where failures of the 511 service are recorded, including affected components, duration, failure type, etc.

TIC (Traveler Information Center): The 511 operations center, collocated with Caltrans and the CHP, which collects and disseminates incident and event data through 511.

Ticker: a scrolling banner on 511.org that displays breaking news, including major traffic disruptions and transit delays.

Total Failure: when traffic.511.org, 511.org or the 511 phone system is unavailable to users for 10 minutes or longer.

Traffic Page: traffic.511.org (traffic home page) and all associated sub-pages within that domain.

TOMS - TravInfo Open Messaging Service: The 511 traffic data feed that is made available to third-party Information Service Providers (ISPs).

Unique visitors: uniquely identified users generating requests on the web server or viewing pages within a defined time period, irrespective of how many visits they make. A visitor is identified through a cookie or an IP number.

User sessions/visits: The presence of a user, with a specific IP address. A new session begins after 10 minutes of inactivity on the web site by the same user.

Web page: A group of pages within the 511 website associated with a particular mode. The 511 website includes the following web pages: Traffic, Transit, Rideshare and Bicycling.

Website: 511.org pages, traffic.511.org pages, transit.511.org pages, rideshare.511.org pages, and bicycling.511.org pages